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AUTHOR Warren, Catharine E., Ed.

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ABSTRACT

The following are among the 55 papers in this volume: "Implications of Person-Environment Congruence in Adult Learning Environments" (Agee); "Reliability and Validity of the Alternate Form of the Education Participation Scale" (Boshier); "Research and Developments in the Neurosciences" (Boucouvalas); "Professional Writing Activity among Professors of Adult Education" (Brockett); "Re-entry for Women" (Butterwick); "Self-directed Learning" (Caffarella, O'Donnell); "University Based Continuing Professional Education" (Chaytor, Chaytor, Poel); "From the Text to the Adult Learning Trajectory" (Chene); "A Profile of Selected Women Leaders" (Cheng); "Learning Styles and Method of Pre-service Education" (Coggins); "Self-directed Learning or an Emancipatory Practice of Adult Education" (Collins); "Teaching and Learning Styles and the Native American Learner" (Conti, Fellenz); "Using a Data Management System to Control Research Data Entry and Manipulation" (Conti, Fellenz); "Conceptions of the Usefulness of Participation in Adult Education Activities" (Costin); "Relationship between Learning Strategies/Meta-Strategies and Experiential Learning Styles of Self-Taught Adults" (Danis); "Adult Basic Skills" (Deane); "Situation Analysis Factors Affecting Program Decisions in the Cooperative Extension System" (Deshler, Wood); "Overcoming Barriers to Education for Rural Adults" (Easton); "Some Implications of Sternberg's Triarchic Theory for Adult Basic Education" (Farr, Moon); "Toward Redefining a Theory of Interdependence of Providers of Continuing Professional Education" (Ferro); "Effective Training for Management & Nonsupervisory Employees" (Foucar-Szocki); "The Process of Becoming an Adult Educator" (Finger); "What Is Education?" (Forrest); "Retirement Planning" (Foutz); "Mutual Enlightenment in Vancouver, 1886-1961" (Hunt); "Critical Thinking, Critical Teaching, Critical Theory" (Inkster); "Knowledge and Learning in Adult Education" (Jarvis); "As the Gavel Strikes" (Kiener); "The Further Development of an Adult Education Classroom Environment Scale" (Langenbach, Aagaard); "Adult Education, McCarthyism, and the Cold War" (Law); "Application of Stufflebeam's CIPP Model" (Lewis, Murphy); "Intentional Learning and Change by Adults with Type II Diabetes" (Lundgren); "Work Experience vs. Literacy" (Mason); "Effects of an Interactive Video Adult Literacy Instruction System" (McElhinney, Wood); "Doing Case Study Research in Adult Education" (Merriam); "Transformation Theory" (Mezirow); and "Insights on the Process of Innovation in Urban Extension Programs of the Cooperative Extension Service" (Milk). Eighteen other papers, a symposium session, two junto session reports, and eight poster session abstracts are also included. (MN)

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PROCEEDINGS
OF THE
TWENTY-NINTH ANNUAL
ADULT EDUCATION RESEARCH CONFERENCE

MAY 6 - 8, 1988

THE UNIVERSITY OF CALGARY
CALGARY, ALBERTA

Editor: Catharine E. Warren

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May 6, 1988

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The Steering Committee is delighted to welcome you to the 29th annual AERC. This conference has developed a tradition of excellence in the presentation of cutting-edge research in the field of adult and continuing education. Both the Steering and Local Arrangements Committees have worked diligently to facilitate the presentation of general and concurrent sessions designed to explore both research issues and findings in our field, and to offer you opportunities to confer with presenters and other conferees. We extend our warmest thanks to the members of the Local Arrangements Committee, our Hosts, and the numerous presenters who have journeyed here from various locations in North America.

We sincerely hope you will enjoy this conference and the Calgary community.

Best Wishes,

Larry G. Martin

Larry G. Martin, Chair
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ADULT EDUCATION RESEARCH CONFERENCE

1988

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Implications of Person-Environment Congruence in Adult Learning Environments

Donna Y. Agee

Abstract

This study reported here was conducted at the School for New Learning at DePaul University and was designed to support curriculum development in nontraditional adult education by providing educators with a description of the interaction between students and the environment using criteria derived from Kolb's Experiential Learning theory. Curriculum development based on this description can create environments that become responsive to student characteristics in ways that promote general development as well as the attainment of specific learning outcomes.

Over the past several years, the quality of learning experiences provided by colleges and universities has increasingly become an issue of concern for the American public. In the midst of a comprehensive national effort to assess public education in general, higher education has become accountable for declining test scores, rising costs, and low minority enrollment. The most significant of the initiatives to assess the quality of American higher education is a study conducted by the National Institute of Education (NIE, 1984) that recommends ways of cultivating the potential for excellence in colleges. Of the three conditions identified by NIE, student involvement in learning is considered to be the most important. According to the Study Group,involvement in learning may be facilitated by colleges that "can control the conditions of active learning by expecting students to be participants in, rather than spectators of, the learning process." (NIE, 1984, p. 17) A key issue for higher education today is to learn how to design programs which promote student involvement in learning through the creation of effective learning environments.

While response to Involvement in Learning was generally positive, some responses indicated a concern that the Study Group general recommendations did not provide for characteristics of special constituencies such as adult learners. (NIE, 1986) With the increased participation of adult students in all forms of postsecondary education, the general reform of higher education must include an assessment of adult programs that flows from the NIE report.

A number of studies conducted to assess and describe learning environments and their constituents have addressed conventional educational programs and traditional college-age students. The definitions of environment used in these studies do not provide for the breadth of experiences provided by higher education for adults. Nevertheless, the literature regarding person-environment congruence has bearing on an examination of nontraditional adult learning environments.

In general, findings suggest that congruence between the person and the environment results in greater satisfaction (Pervin, 1968; Furnham and Shaeffer, 1984), job performance (Sims, 1981), mental health (Furnham and Shaeffer, 1984), and motivation for learning (Boshier, 1973). High degrees of dissonance between the person and the environment often results in the individual's withdrawal from the environment (Boshier,

1973) or in his failure to perform (Sims, 1981), while moderate to low levels of dissonance may stimulate behavioral and developmental growth in the individual. (Hunt, 1971; Sims, 1983) All of these studies address the effect of person-environment congruence as they relate to the objectives of the particular environment studied. Hunt notes that organizations that aim for developmental change "are likely to define congruence in terms of a specified degree of disparity between the person and the environment" and those that aim for functional goals "prescribe little or no person-environment disparity." (Hunt, 1974, p. 8)

While these studies provide information regarding the interaction between the person and the environment, more information is needed regarding the interaction between adult learners and the environments created for them. An examination of learning environments designed for adults using criteria analogous to student characteristics that bear directly on learning would begin to meet this need. Kolb's Experiential Learning Theory may provide the vehicle for more fully describing the person and the environment and for planning student involvement in learning to achieve the goals articulated in the NIE report. Student involvement is implicit in this theory that defines learning and development as "transactions between the person and the environment" in which "knowledge is created through the transformation of experience." (Kolb, 1984, p. 38) The theory is based on four dimensions of development that provide criteria for differentiating preferred learning styles of students and the environmental orientation of the learning environment: Affective Complexity, Perceptual Complexity, Symbolic Complexity, and Behavioral Complexity. These dimensions are addressed through involvement in four corresponding adaptive modes: Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation.

Based on this theory, instruments have been designed and validated to measure people and environments. Kolb's Learning Styles Inventory (LSI) measures the individual's relative preference for each of the adaptive modes. In his study of graduate courses in landscape architecture, Fry (1978) developed the Learning Environment Diagnostic (LED) to measure the orientation of classroom environments to each of the modes. Evaluation of student perceptions of the environment yields an environment type that describes the environment's emphasis with respect to one of the four modes.

There is a need, however, for an examination of learning environments designed for adults to determine the potential of the environments to enable students in learning. In the study reported here, student learning style was determined through the use of the LSI and environment orientation was described by the LED resulting in a profile of person-environment congruence. The objectives of this study were (1) to describe learning environments provided by the six core curriculum courses at the School for New Learning, DePaul University, in terms of the four environment types derived from Experiential Learning Theory and (2) to determine the degree of congruence between students in terms of learning style and the type of environment represented by core curriculum courses.

Study Design

The population for the study was provided by students admitted to the B.A. program. From that population, seven independent samples were selected to provide data relevant to each of the two primary objectives. Six of the samples were composed of students enrolled in core curriculum courses and provided descriptions of these courses enabling the assignment of an environment type each course. The seventh sample consisted of students who completed all program requirements and responded to their satisfaction with and their perceptions of the value of each of the core curriculum courses. Since the course environments assessed are guided by specific syllabi to ensure a reasonable degree of consistency, students at different stages of the program will have similar experiences in each of the core curriculum courses, permitting the use of a cross-sectional design.

Given the existing literature in the field of person-environment congruence and an understanding of the conceptual framework of the School for New Learning program, the hypotheses that guided the study emerged naturally. Since the School for New Learning is intentional in its use of Experiential Learning Theory as a guide in curriculum design and assessment, it was expected that core curriculum courses would represent the full array of environment types defined by Fry. Further, it was expected that SNL students are distributed across all four learning styles fairly evenly and that all students experience congruence with some environments and incongruence with others in the course of the core curriculum. It was also hypothesized that students are more satisfied with environments with which they are congruent and found more value in their experience in those environments.

The Environment

Based on mean LED scores generated by each sample, an environment type was assigned to each course. In each of the six samples, the highest mean score was in the Behavioral Environment type, reflecting an emphasis on Active Experimentation. While differences among mean scores in each course are sometimes minimally significant, the rank ordering of environmental emphasis in each course is noteworthy. Just as each course is predominantly Behavioral in emphasis, each emphasizes symbolic skills, or abstract conceptualization, the least. Also, only in the core curriculum courses that are guided independent study were perceptual skills, derived from reflective observation, emphasized over affective, or concrete experience, skills that often stress interaction as a source of learning.

In general, the data suggest that the core curriculum environment emphasizes the application of appropriate solutions or models to problems and situations relevant to the student, often in the context of group work. The nature of the curriculum is highly interactive and affective but also encourages individuals to reflect on the meaning of experience and to note patterns in experience which may be articulated through theories or models. However, the curriculum emphasis on the creation of theories and models is significantly weaker than its emphasis on all other modes of learning.

In order to insure that student perceptions of environment were reliable data to use to name the environment type, respondents in each sample were grouped by learning style. Within these subsamples, mean LED scores did not vary significantly from sample mean LED scores. In addition respondents across the six samples for core curriculum courses were grouped by learning style to determine if respondents of each learning style differentiate among environments. Or if, for example, Accommodators tend to view any environment as Affective or Behavioral. Again, there was no significant difference between subsample and sample mean LED scores.

Further it was found that distribution across the four learning styles was relatively even in each of the six samples responding to the LED. However, when learning style samples were formed from the entire group of LED respondents, it was found that there were significantly more concrete (65%) than abstract (35%) students included in the sampled population.

Person-Environment Congruence

In this study, congruence between the person and the environment was defined in terms of learning mode orientation drawn from Experiential Learning Theory. Environment types assigned to core curriculum courses reflect the environmental emphasis on one of the four modes of learning. Learning style, however, is a descriptor derived from the student's strength in two modes of learning. For example, Behavioral environments indicate an emphasis toward active experimentation, while students who are Accommodators are strong in skills of concrete experience as well as active experimentation. Congruence between SNL students and core curriculum courses was defined as emphasis on the same mode of learning. Therefore, both Accommodators and Convergers (both strong in skills of active experimentation) were considered congruent with Behavioral environments.

Since all of the core curriculum courses were typed as Behavioral environments, all students were either congruent with all courses or incongruent with all courses. While this was a surprising finding, it suggested tantalizing results from the examination of the impact of congruence on perceptions of value and satisfaction. If only Accommodators and Convergers (43% of students sampled) were found to be congruent with the entire core curriculum, then it was reasonable to expect, given the literature reviewed, that Accommodators and Convergers would be significantly more satisfied with learning experiences provided by the core curriculum.

This was not the case. The seventh sample of students, those who had completed all core curriculum courses, responded to their satisfaction with each course and their perception of its value. This sample was divided into subsamples of students who were congruent with the core curriculum (Accommodators and Convergers) or incongruent (Divergers and Assimilators). When mean scores on "satisfaction with" and "perceptions of value" of each core curriculum courses were compared to subsample means of congruent and incongruent students, no correlation was found between congruence and satisfaction/value. Similarly, it was found that there was no relationship between learning style and perceptions of value and satisfaction.

Discussion

These surprising results raised an important question for adult educators: Why are students who are incongruent with the core curriculum of their degree program as satisfied with their learning experiences as students who are congruent with their environment? This question recalls Hunt's observation that organizations that aim for developmental change "are likely to define congruence in terms of a specified degree of disparity between the person and the environment." (Hunt, 1974, p. 8) Hunt's comment comes from his discussion of Matching Models in Education and is focused on curricular designs that examine person-environment congruence. Organizations that seek the general development of constituents, such as educational programs, provide more tolerance for "mismatched" students than do organizations that have more functional goals, such as the workplace. Such organizations recognize that moderate incongruence with an environment can provide the discontinuity that many adult development theorists credit with stimulating growth.

Hunt's distinction between types of organizations may provide a framework for explaining why incongruent students are able to find value and satisfaction in their environments, but it does not help explain how or where they find it. It is not enough to know if students are congruent with their environment. It is important to know what kinds of students are most likely to be incongruent and congruent with the learning processes provided by the organization and what kinds of support are required by students who are faced with the challenge of adapting to an environment.

The notion that the ideal educational environment is a balance between sources of challenge and support is not new. From the work of Neville Sanford, Lee Knefelkamp designed the Practice-Theory-Practice model for curriculum analysis and design using the concept of challenge/support as its foundation. (Knelfelkamp, 1981) Recognizing that students of different styles and at different developmental stages find their sources of challenge and support in different characteristics of the learning environment, Knefelkamp recommends assessing the environment's capacity to provide appropriate sources of challenge and support for its constituents. Environments that provide too much challenge without sufficient support may overwhelm students and cause them to withdraw from the environment. A disproportionate degree of support, or extreme congruence with the environment, does not facilitate developmental change. A balance between challenge and support, and a variety of sources of each, permits the varying combinations of person characteristics and environment characteristics that can address the functional and developmental goals of individual learners.

Challenge-Support theory may be applied to the study of the SNL core curriculum to help explain how students incongruent with the environment find satisfaction and value in their learning experiences. The LED measured environments in term of five components that bear most directly on learning: objectives, source of information, role of teacher, role of student, techniques of assessment and reward. If the orientation of these components provides significant challenge for student whose learning style is not congruent with the environment type, there must be sources of support enabling these students to meet the challenge and to find satisfaction and value. Other components of the environment not measured that may have some impact are (1) student motivation for participating (2) personality of instructor (3) personality of class (4) support services (5) logistics responsive to adult life styles and (6) specific content of the learning experience. Therefore, in addition to assessing the congruence between the person and the environment, it is important to assess the student's perceptions of sources of challenge and support in the environment and to determine which sources of support respond most directly to particular challenges.

The implications of person-environment congruence as explained by challenge-support theory have direct impact on facilitating student involvement in learning. When organizations recognize the characteristics of their constituents they can create an array of learning opportunities that both attract and stimulate. In addition, however, these organizations can empower their students by sharing the information. Students need to become aware of their own characteristics as learners, of characteristics of the environment and of the developmental as well as functional goals of education. In addition, they need to be given opportunities to exercise some control over the learning environment; to select sources of challenge and support appropriate to their characteristics and their goals.

Students who are involved in the design of learning invest in its effectiveness on two levels: as consumers seeking a needed product and as inventors eager to see the model work. That kind of investment makes it very difficult to be a spectator in the learning process as the conditions of learning emanate from the involvement of the student.

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RELIABILITY AND VALIDITY OF THE ALTERNATE FORM OF THE EDUCATION PARTICIPATION SCALE [1]

Roger Boshier
Adult Education Research Centre,
University of British Columbia, Vancouver

ABSTRACT

The reliability and validity of an alternate form of the E.P.S. containing seven six-item factors was established through analysis of data obtained on 845 Ss in Asia and Canada.

INTRODUCTION

Program planning in adult education places a high priority on the importance of satisfying needs. Participant motivational orientations vary as a function of needs and planners have variously attempted to match program content and processes to orientations that impelled participants to enrol. This kind of ethos led to the creation of the Education Participation Scale in the late 1960's and, despite the current scholarly preoccupation with sociological constructs, there is no denying the fact dramas relating to power and control, inequity and other "critical" matters, are acted out by individual participants and non-participants. Hence the persistent and unflagging interest in the psychology of adult learners and motivational orientations that have the potential to explain variance in the decision to enrol and/or remain in adult education programs.

The first form of the E.P.S. is widely used and the availability of a large data base enabled researchers to create norms and investigate the durability of the factor structure across cultures. This work continues and has led to the translation of the 1976 version, printed commercially in 1982, into Spanish, Portuguese, German and Chinese. However, despite persistent interest, it's ties to the Houle (1961) typology were unecessarily limiting (since that typology was based on an exceedingly small [n=22], culturally biased and unusual data set). Moreover, the unequal number of items in E.P.S. (First-form) factors makes the scoring system appear assymetrical and requires that means be calculated. Finally, it's "middle class" ethos is not wholly desireable in the 1990's and beyond. Thus, Boshier (1983) described the development of what was then known as "an A.B.E." but has since become a more "general" form of the E.P.S. He described how 400 potential items were assembled, reduced to 120 by eliminating overlaps and then administered to 257 participants at Vancouver Community College. Orthogonal rotation produced an elegant seven factor solution. This was a satisfying analysis since each factor was comprised of six pure items (where none loaded significantly on more than one factor). The meaning of each was described as were mean scores for 140 men and 200 women, 21 of whom were prison inmates. The psychometric properties of this instrument, whose items were derived by asking participants about what impelled them to enrol, were very promising. Since then the work has continued and the purpose of this paper is to:

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[1] Both forms of the E.P.S. are copyrighted but may be obtained from Learningpress Ltd., P.O. Box 46403, Postal Station G, 3760 West 10th Ave., Vancouver, B.C. V6R 2G0, Canada.

1. Present norms for the E.P.S. (alternate form) derived from a reasonably large data set (n=845).
2. Examine the reliability (test/ retest and internal consistency) of the E.P.S. (A-form)
3. Examine the basis of, and report the results of procedures designed to examine concurrent and predictive validity.

METHOD

The study was performed in two stages. First, the E.P.S. (A-form) was administered to 845 participants enrolled in adult education programs in Singapore, the Yukon and B.C. (Canada). A "masterfile" consisting of socio-demographic data (on sex, age and other relevant variables) as well as responses to the 42 E.P.S. items, was assembled. Twenty-three Singaporeans completed both the "new" and "old" forms. In addition, 63 participants enrolled at V.C.C. completed the A-form twice, six weeks apart.

Next, validity data were secured. Nine immigrant Ss from contrasting backgrounds were selected from a class at the King Edward campus of V.C.C. Without referring to their previously completed E.P.S. a researcher interviewed them about their personal and family circumstances, their experiences as an immigrant to Canada, and immediate and long-term goals. During interviews the researcher took written notes. Participants were then handed seven cards on which were written the name of, and items that comprised, each of the E.P.S. (A-form) factors. Ss were shown a chart that, in the horizontal axis, listed each of the seven E.P.S. (A-form) factors and, in the vertical, a scale ranging from six to 24. The researcher read each item aloud, handed the respondent some pennies and said: "Move the coins along the lines marked six to 24 to record your estimate of the the extent to which you were influenced by these reasons to enrol in College Preparatory English courses. Six means "no influence"; 24 means "much influence". You may reread the items on the cards. When finished, call me". The researcher then went to the other side of the room. During the time Ss were making their estimates the researcher estimated the S's motivational orientation scores on a scale similar to the one used in the coin procedure. Later, Ss scores derived from the E.P.S. (A-form) were compared to those derived from the coin procedure and the researcher's estimates. Various discrepancy scores were calculated.

RESULTS

Characteristics of Respondents

The population consisted of 845 respondents of whom 523 (61.9 percent) were women and 322 (38.1 percent) were men. They had a mean age of 27.12 years (S.D.=8.33). The population was created by combining files of data gathered in the Yukon territory, from the Vancouver community college, Fraser Valley

College, U.B.C. Nursing, from programs conducted in Singapore, and programs created for inmates in prisons for men and women. The bulk of the population were enrolled in "college preparatory" and A.B.E. programs at V.C.C. and Fraser Valley College. Of the 845 Ss, 383 (45.3 percent) said they were born in Canada, 310 (36.7 percent) said they were born in Asia, 28 (3.3 percent) were born in East Europe, 46 (5.4 percent) in West and South Europe, eleven (1.3 percent) in the Middle East, 34 (4.0 percent) in Latin America, nine in the U.S.A., and 24 in "other" countries.

E.P.S. (A-form) scale scores were derived by summing over responses to each of six items that comprised a factor. "No Influence" was scored 1; "Little Influence" scored 2; "Moderate Influence" 3; "Much Influence" 4. Thus scale scores range from six to 24. There are an equal number of items in each factor and thus no need to calculate mean scale scores (as was the case with the E.P.S. - F-form). Scale scores (range 6 to 24) were calculated for the 845 Ss in the masterfile and reported here in the same order as the factors appear on the score sheet. Communication Improvement X=15.65, S.D.=5.84; Social Contact X=11.92, S.D.=4.90; Educational Preparation X=17.80, S.D.=4.83; Professional Advancement X=18.52, S.D.=4.47; Family Togetherness X=9.79, S.D.=4.17, Social Stimulation X=10.25, S.D=4.07; Cognitive Interest X=16.81, S.D.=4.11. None of the mean scores were unduly skewed towards the extreme ends of the scale and, if fifteen is considered the midpoint, three means were above, four were below, and the S.D.'s were consistent across factors.

Relationships between age, sex and E.P.S. scores, often deemed relevant to research concerned with the motivational orientations of people in different stages of the life cycle, were examined by calculating two-way ANOVA's where each of the E.P.S. scores was considered the dependent variable and sex and six age groups were considered independent. With regard to main effects, age had a significant effect on Communication Improvement (F=4.09, p<.001) but, in a two-way interaction with sex, was not significant. The main effects of sex (F=4.55, p .03) and age groups (F=6.76, p<.001) had a significant effect on Social Contact but there was no significant two-way interaction. With regard to Educational Preparation, sex (F=13.56, p<.001) and age (F=3.06, p<.009) had significant main effects but the two-way interaction was insignificant. On Professional Advancement there was no significant two-way interaction although age (F=4.22, p<.001) had a significant main effect with younger Ss being more impelled by this orientation than older ones. With regard to Family Togetherness, women (F=2.88, p<.09) and older Ss (F=2.75, p<.01) were the most impelled by this orientation but there was no significant two-way interaction. With regard to Social Stimulation and Cognitive Interest there was no significant difference in the mean scores of men or women in the different age groups. In general, orientation scores did not significantly vary as a function of the combined effects of age and sex and this poses problems for program planning theory based on assumptions about "developmental tasks" and "stages" purportedly tied to age and sex. The same conclusion was derived from an analysis of 13,000 cases involving use of the E.P.S. (F-form).

In nearly all studies employing the E.P.S., scale scores are treated separately, usually as independent variables employed to predict variance in a dependent variable. In an attempt to broaden understanding concerning the joint or interactive effects of orientations two discriminant analyses were run. In the first, sex was dependent and all the A-form scale scores were independent. Scale score means for each sex were calculated, then a standardized canonical discriminant function coeffient. On the basis of the combined effects of the coefficients that constituted the function, 59.01 percent of the 523 women and 61.7 percent of the 321 men were classified into their proper group. The standardized discriminant function coeffients for Educational Preparation (.81), and Social Contact (.71) were positive; those for Family Togetherness (-.62) and Cognitive Interest (-.54) were negative. Communication Improvement (.01), Social Stimulation (.01) were at the mean while Professional Advancement had a small negative effect (-.17). In a similar analysis where age was the dependent variable, five functions correctly classified only 25.24 percent of the Ss. Thus, interactions between E.P.S. (A-form) scale scores appear to be a better predictor of sex than age.

Reliability

Two procedures were implemented to examine the reliability of the A-form.

Internal Consistency

The internal consistency of each factor was examined by calculating coefficient alpha for each factor using all 845 cases. These were all satisfactorily high: Communication Improvement .89; Social Contact .91; Educational Preparation .80; Professional Advancement .79; Family Togetherness .82; Social Stimulation .80; Cognitive Interest .76.

Test/Retest

In a second procedure the instrument was administered twice to 65 Ss in two Grade 11 equivalent classes at V.C.C. Anonymity was preserved but correct matching of the "test" and "retest" forms assured by having Ss note their date and place of birth on both questionnaires. Responses to each item, as well as scale scores, were correlated. The mean Pearson product-moment correlation for the 42 items (ti x tii) was .49; the mean stability-over-time coefficients for each factor were: Communication Improvement r=.56; Social Contact r=.75; Educational Preparation r=.61; Professional Advancement r=.70; Family Togetherness r=.74; Social Stimulation r=.58; Cognitive Interest r=.60. All these were significant beyond the p<.001 level. The factors were internally consistent and the instrument stable over time.

Validity

Content Validity

Content validity concerns the extent to which the items represent a fair sampling of the domain of interest. It is not usually "tested" but ensured through the adoption of appropriate measures during its construction. Neither Houle's or any other typology was involved here. Items were derived by asking Ss why they were enrolled. Hence 120 Ss in the largest A.B.E. oriented institution in Western Canada were asked to think and talk about why they had enrolled and then write five "reasons" on a piece of paper. During this process the researcher "floated" to ensure that less literate Ss got their reasons recorded. This produced approximately 400 reasons then transferred to index cards and sorted into a-priori and tentative "factors" by four researcher's who had to agree on the chosen classification. Because many Ss were enrolled for the same reasons there was considerable redundancy in the 400 items, so many were eliminated and others edited and reworded so as to be grammatical and comprehensible to all Ss. Plain language was used. Next, ten durable items from the E.P.S. (F-form) deemed applicable were inserted. The resultant 120 items were cast on the same 4-point scale as the E.P.S. (F-form). This 120-item instrument was then administered to 257 Ss at V.C.C. and factor analyzed in the manner described by Boshier (1983). The seven factors that emerged captured in a parsimonious fashion, the "types" of orientations visible in the a-priori "factors" assembled from the original 400 "items". The refined instrument had 42 items.

Concurrent Validity

Concurrent validity concerns the extent to which the instrument yields the same scores as other instruments which, on an a-priori basis, should yield similar scores. Since this was a descendant of and contains ten items from the E.P.S. (F-form) both were administered to 23 Ss enrolled in a Diploma in Adult Education class in Singapore. They did the F-Form on a Monday and the A-form a week later. Intercorrelations between the relevant factors were arrayed in a matrix where the six F-form factors were in the horizontal and seven A-form factors in the vertical axes. The mean intercorrelation at the 42 intersections was r=.34. Against this, Social Contact (F) x Social Contact (A) yielded r=.70; Social Stimulation (F) x Social Stimulation (A) r=.54; Professional Advancement (F) x (A) r=.52; Community Service (F) x Family Togetherness (A) r=.64; Cognitive Interest (F) x (A) r=.71. These related factors were all significantly intercorrelated. For these Singaporeans the A-form had considerable concurrent validity.

Predictive Validity

Predictive validity concerns the extent to which the instrument "predicts" a criterion behaviour. Prediction refers to functional relationships between the instrument and events occuring before, during and/or after it is administered. A test designed to "predict" absenteeism is not usually designed to show who will be an absentee in the future, but rather "predict" who is and is not an absentee at the time the test is taken. Some writers claim predictive validity concerns "post-diction" ("predicting"the past), "concurrent validity" ("predicting" the present) and "pre-diction" ("predicting the future"). But each involves the relating of a predictor to a criterion measure, after data are available. Predictive validity only involves examining the degree of correspondence between the two measures involved.

The "researcher's estimates", made after interviews with Ss, were conducted to examine predictive validity and represented a needed development in E.P.S. research. The respondent and researcher's estimates concerning nine Ss were plotted on a chart (Fig. 1) along with the scale scores derived from the E.P.S. The Ss were: "Laura", aged 28, raised in Guangzhou, China; "Nancita", aged 29, raised in Lima, Peru; "Alicia", aged 42, from Grodno, Poland; "William", aged 23, from Hong Kong; "Zbeziak", 27, from Ludan, Poland; "Zenobixa", aged 51, from Peru; "Jangjeet", aged 21, from India; "Patricia", aged 23, from Medellin, Columbia; "Paulina", aged 33, from Santiago, Chile. A "questionnaire/respondent" discrepancy score was derived by summing discrepancies between the respondent's estimate on, say, Communication Improvement, and their E.P.S. score on this factor, with the discrepancies on the remaining six factors. Over all seven factors the maximum possible discrepancy, denoting complete disagreement, was 126; the minimum, denoting complete agreement, was zero. On one factor the range was zero to eighteen.

The mean factor questionnaire/respondent D-scores, out of eighteen, for the nine Ss interviewed, were all uniformly low: Communication Improvement=1.67; Social Contact=2.55; Educational Preparation=2.22; Professional Advancement=3.33; Family Togetherness=4.44; Social Stimulation=2.78; Cognitive Interest=3.78. The mean questionnaire/researcher's estimate D-scores, out of eighteen, were also uniformly low: Communication Improvement 1.44; Social Contact 2.55; Educational Preparation 3.78; Professional Advancement 3.11; Family Togetherness 1.33; Social Stimulation 4.33; Cognitive Interest 4.33. The E.P.S. yielded scores highly congruent with both the Ss and the researcher's estimates concerning the extent to which each factor impelled S to enrol. This was compelling evidence attesting to predictive validity. Recall that the researcher estimated the scores after interviewing the S but without reference to the questionnaire. The mean D-score for each factor was just under 3.00 where total agreement was zero and "total disagreement" was eighteen. Only nine interviews were conducted and nine estimates made but the uniform nature of the D-scores (across Ss and factors) suggests that the addition of more Ss would simply extend the pattern established.

All these procedures should be replicated but, on the basis of the findings reported here, it appears that the E.P.S. (A-form) has adequate, if not exemplary, predictive validity. The psychometric foundations of the E.P.S. (A-form) are being built in different cultural settings and any researcher replicating or advancing the present findings is invited to send their data for inclusion in the masterfile. We are particularly interested in studies employing qualitative as well as quantitative methodologies.

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Research and Developments in the Neurosciences: Relevance for Adult Education

Marcie Boucouvalas[1]

Abstract

Thoughtful study and awareness of developments in the neurosciences can potentially help adult educators further develop an expanded foundation to adult education as a field of both study and practice, particularly in light of the findings relevant to neuroplasticity of the adult brain (i.e., a continuous adaptability of neuronal structure and function). This inquiry provides an initial step in that direction by reviewing the research literature from the neurosciences (for both content and methodological derivation of findings), focusing particularly on neuroplasticity. One must keep cognizant, however, of some caveats. For example, oversimplification and overgeneralization can result from a lack of appreciation of the complexity of the territory.

Communications between educators and the neurosciences have been proceeding for over a decade now. Publications range from the simplified (and sometimes oversimplified) notions of "brain lateralization" and "evoked potential" to fuller treatments by neuroscientists themselves on the structure and function of the brain and central nervous system and the relations of recent research to learning and memory (for example, Chall & Mirsky, 1978; Friedman, Klivington, & Peterson, 1986; Grady & Lueke, 1978; Livingston, 1983; Lyons, 1985; Peterson, 1984; Straham & Toepfer, 1984; Sylwester, 1983, 1986a, 1986b; Sylwester et al, 1981; Toepper, 1982; Torello & Duffy, 1985; Volpe & Gazzaniga, 1979, Wittrock, 1980). Adult education, however is not a part of most discussions and publications, despite the fact that adult educators such as Kidd and Houle have stressed the important potential contributions of the neurosciences. Houle, in fact, still urges that we interest the neuroscientists and draw them into adult education inquiry. Even--in her inquiries on brain lateralization--has also expressed a conviction that the neurosciences may have much to offer the field of adult education.

The neurosciences, of course, form a very complex territory. Branches include: Neuroanatomy, neurophysiology, neurochemistry, neurobiology (cellular and molecular), and neuropsychology. At one time the branches hardly communicated among themselves, thus affording even more difficulty in treating them as a relevant whole. Much has changed, however, in recent years. The various branches are now communicating both in terms of collaborative research as well as in the form of professional meetings and joint conferences. These facts are lending for a more integrated understanding of the territory. Up until recently, even at joint meetings, molecular and cellular concerns and discussions have usually dominated. This year (November, 1987), however, the program agenda of the 17th annual meeting of the Society for Neuroscience was balanced with "whole-animal" learning (Broad attack, 1987, p. 1651). Perhaps, then, it is more timely than ever to embark upon a meta-research type inquiry to synthesize potential knowledge claims from the neurosciences and introduce them for dialogue and discussion among adult educators.

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[1] Marcie Boucouvalas, Associate Professor, Virginia Polytechnic Institute & State University Graduate Center, 2990 Telestar Court, Falls Church, VA 22042

Purpose, Scope, and Approach

The purpose of the inquiry was to review the research literature in the neurosciences, its potential relevance for adult education professionals, and to introduce the material to the field for dialogue and discussion. Synthesizing bodies of information and knowledge from other disciplines and introducing it to another field of inquiry constitutes a form of meta-research. This presentation and paper upon which it is based is preliminary and foundational in nature, a first step in a broader and deeper inquiry. The focus of the present incipient inquiry was upon the research relevant to the phenomenon of neuroplasticity, which underlies and undergirds claims of a growing, adapting neuronal structure during adulthood.

Data sources included books, articles, conference proceedings, and annals of the international literature base written in the English language. Most of the literature reviewed was addressed to neuroscientists per se and dealt with original research. Original sources were examined to garner a structural and functional understanding of the research upon which knowledge claims are based. A further search was then pursued relevant to the interface between neuroscience and education. Although a number of articles, books, and a few conference proceedings were retrieved, none was from the adult education literature. Material resources were complemented by discussions with neuroscientists. Such discussions were preliminary in nature; more in-depth interviews with leading neuroscientists continue.

Findings and Discussion

A consistent theme permeating the literature of the neurosciences is the continuous adaptability and growth of the brain's capacity. Barring disease or extreme disuse, life in the adult brain is neither static nor totally decremental in nature.

Methodologically speaking, data for knowledge claims in the literature reviewed have generally been derived from three and a more recently emerging fourth source: a) Controlled experiments with animals such as snails, rats, cats, rabbits, and monkeys (including invasive experimental injury); b) Study of living brain-injured humans via accident, illness, disease on a large scale or case study basis sometimes in a comparative manner. Also, studies of how the brain recovers from injury have generated additional data; c) Autopsies of injured and normally functioning humans; and d) EEG and the more recent computer imaging technologies such as BEAM (Brain Electric Activity Mapping), a non-invasive approach which records, via computer imaging, moment-to-moment changes in brain activity which correspond with learning (Duffy, Burchfiel, & Lombroso, 1979; Duffy et al., 1980a, 1980b; Torello & Duffy, 1985); as well as other approaches such as CAT-scans, PET-scans, and NMR (Nuclear Magnetic Resonance), and neurometics (John, Prichep, & Fridman, 1988).

Relevance for Adult Education

The findings of neuroplasticity in the adult brain offer a potential neuroscientific basis to the idea of adult learning and to the potential viability of learning as a lifelong process. This expanded knowledge base broadens and enriches adult education as a field of study and has implications likewise for the field of practice.

Often we become our belief systems and theories and our expectations of self and others can be releasing or inhibiting. A strongly held belief, for example, in "anatomical fixity" of brain capacity which had become ingrained by the 1950's inhibited researchers from recognizing serendipitously generated experimental evidence which suggested the plasticity of the brain even in the adult years.

If, as the findings suggest, synaptogenesis and strengthening of existing synapses continues during adulthood this knowledge may help ameliorate doubts about one's learning ability with age. Just the knowledge itself could serve as a foundation for a more positive attitude and motivation in learning for both the adult learner and learning professional.

More specifically, the suggestion of the research by Sinclair (1986) that synapses were strengthened by rest after use and weakened by overuse may be of import to a further understanding of information overload particularly in today's information society and suggest further pathways of collaborative research between neuroscientists and educators. Although the brain does appear to function better with more information, information overload and overuse of the capacity can raise havoc. At minimum, if valid, such findings could offer some food for thought for those involved in program planning, design, administration, and other areas. Perhaps learners themselves are aware when the synaptic "connections" are not being made and could use this information as a possible alert that they are in information overload or overuse of the brain's energy source just as one is aware when one is overtaxing the heart or the muscles. The attitude and awareness generated by such a stance could serve to alleviate both the frustration and ensuing anger, aggression or sometimes depression which sometimes besets the adult learners wanting to accomplish it all given a "time is running out" frame of mind.

Technological advances may yet open new vistas in affording further access to and understanding of the brain's inner workings. For example, BEAM (Brain Electric Activity Mapping), noted earlier, offers computer images or visual "pictures" of what happens inside the brain when let's say a dyslexic person reads--thus offering more accurate diagnosis for those involved in literacy efforts. Neuromagnetism and the pioneering work of physicist Samuel Williamson (New York University) is discovering technological means to measure the magnetic fields created around the head when individuals are in different states of brain function. These are just a few examples.

Although many actual concrete educational implications may not be totally clear as yet, it behooves adult education practitioners and researchers to stay informed and knowledgeable particularly with regard to the basic research upon which knowledge claims are based. In that way, one might prevent problems such as the runaway programs which have surfaced on brain lateralization (i.e., right

Even a few decades or so ago the belief that the nervous system and neuronal capacity was wired and fixed during development and not amenable to change once adulthood was reached was as widespread as the belief that adulthood was a period of stability and the adage that "you can't teach an old dog new tricks." In fact, as of the 1950's the prevailing dogma was that changes in the adult brain stopped and the aging process brought about demise. This "doctrine of anatomical fixity" initially hampered researchers from even recognizing serendipitous experimental evidence that, for example, training led to growth of the cerebral cortex. Questions by medical practitioners and researchers about how people recovered after brain injury, however, led to research which revealed the plasticity (i.e. modifiability and regenerative capacity) of the neuronal structures. (Cotman, 1978; Bignami, et al., 1985; Neuroplasticity and Repair, 1983; Seil, Herbert, & Carlson, 1987). By the 1960's and 1970's, evidence suggested that dendritic growth as well as synaptogenesis appeared to continue even in more mature systems (Renner & Rosenzweig, 1987).

Scientists are still working on the why and how of such observations. Endogenous and exogenous environments appear to play a pivotal role. For example, findings that the structure of the peripheral nervous system regenerated more easily than that of the central nervous system (CNS) led to further experimentation suggesting that the individual potential for regeneration was inherent in the neuronal structure but did not express itself possibly due to the growth-limiting properties of the endogenous environment in the CNS (Black, 1985). An equally powerful finding and one most relevant to lifelong learning professionals is the role that exogenous environments seem to play. The environment is an important factor in determining whether regenerative potential will be expressed (Bloom, 1985).

Perhaps one of the most pertinent breakthroughs of the past decade is the "working" conclusion by neuroscientists (which is now driving much research) that axon-sprouting and synaptogenesis is not something restricted to repair and regeneration after injury, but may represent an inherent capacity of brain plasticity (Cotman, 1978; Marsan & Mathies, 1982; Reinis & Goldman, 1982). Moreover, increasingly compelling evidence is emerging relevant to the role that enriched environments play in the brain's continuous growth (Renner & Rosenzweig, 1987).

Many structures of the brain appear to be modified by enriching experiences (particularly exposure to a variety of experiences): for example, thickness of the hippocampus, increase in synaptic density, changes in neurochemistry (e.g. neurotransmitters, nucleic acid, protein, cholinergic system, etc.)--all of which affect both learning and memory (Milgram, MacLeod, & Petit, 1987; Winlow & McCrohan, 1987). In other words, the brain appears to be a plastic organ responding to shaping and modifiability by interaction with the external culture or environment.

Synapses, of course, are those all-important links through which neurons process information and "talk to each other." Increasing evidence suggests that synapses play an important role in adult information storage and that experience may initiate synaptogenesis (Greenough, 1984). Such neural connections (i.e. the strength of synapses) seem to change likewise as a function of their own experience. As suggested by the research of Sinclair (1986), they are weakened by overuse and strengthened by rest after use. This assertion, as is evident, presents a potential challenge to the assumptions of many learning theories.

brain/left brain) or brain growth spurts, sometimes based upon an insufficient understanding of the parameters and dimensions of the research claims.

Keeping mindful of the caveats, the growing literature base from the neurosciences provides a new way of thinking about adult learning and education and provides an expanded base for both research and practice. This modest discussion has hopefully provided an incipient step along the way and will encourage further dialogue, discussion, and action among adult education professionals.

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PROFESSIONAL WRITING ACTIVITY AMONG PROFESSORS OF ADULT EDUCATION

Ralph G. Brockett, Assistant Professor, Montana State University

Abstract: Professors of adult education were surveyed relative to the ways in which they contribute to the literature of the field. It was found that a large percentage of professors are actively engaged in writing activity and that relationships exist among certain attitudes toward professional writing.

Development of a knowledge base is vital to the establishment of any field of study. In adult education, a body of professional literature has been evolving for several decades. However, the field continues to struggle with criticisms centering around "marginal" status and challenges to the quality of its research base. If the development of adult education as a field of study is a worthwhile endeavor, it would seem appropriate to consider whether criticisms such as those mentioned above are warranted. One way to accomplish this is by exploring ways in which individuals contribute to the knowledge base of the field.

The purpose of this study, therefore, is to examine attitudes and practices relative to professional writing activity among adult education professors. Three questions provide a general framework for the study. First, what are some of the writing patterns of adult education professors? Second, how extensive is the publication activity of adult education professors? Third, what value do professors ascribe to their professional writing activity?

RELATED LITERATURE

Much has been written about publishing among college professors. In an extensive review, Boice and Jones (1984) cited studies suggesting that "the median number of scholarly publications" for academicians "is zero" and that "as few as 10 percent of writers in specific areas account for over 50 percent of the literature" (p. 567). Major reasons cited for this lack of activity were distractions, lack of time, and writing blocks.

In another article, Boice and Johnson (1984) reported a study utilizing the Writing Habits Survey (WHS), a 12-item scale designed to provide information about writing practices, barriers to writing, and level of productivity. The survey was sent to all faculty members at a doctoral granting university; a total of 400 individuals responded. It was found that over half of the faculty reported spending 2-10 hours per week on writing activity, that most individuals wrote in a "sporadic" pattern and that 76% of the individuals thought about writing either daily or several times per week.

Within adult education, at least two efforts have been made to study publication activity among professors. Long (1977) analyzed publication lists from members of the 1972 Commission of Professors of Adult Education. The 81 respondents reported 2,098 publications over a 23-year period, with a range of 0-194. Of these, about 40% were journal articles while another 40% were miscellaneous publications such as research reports or conference proceedings. Books comprised about 10% of the publications.

More recently, Garrison and Baskett (1987) interviewed 17 North American adult education researchers selected on the basis of their productivity. It was noted that these individuals, during research careers spanning an average of 18 years, "had each published an average of 38 articles, 9 book chapters, 4 books, and 6 monographs" (p.91). Major trends emerging from the interviews included the following:

* Most interviewees reported using a variety of research designs and stated that they felt comfortable working in both quantitative and qualitative paradigms;

* Nearly all respondents identified an informal network, usually consisting of colleagues from other universities, former students, junior colleagues from their own universities, and current doctoral students; and

* Most stated that they block off a period of time for writing, prefer to write in a particular place, and on the average complete three drafts of a manuscript.

Based on these interviews, Garrison and Baskett concluded that new adult education researchers need to be concerned with asking the "right" questions and with the overall quality of their research as opposed to the mere quantity of publications.

The above two studies each provide insights into writing for publication in adult education and, as such, are valuable contributions to the literature. However, Long's data are now about 15 years old and stress only the quantity of publications produced. Garrison and Baskett have effectively uncovered many insights into the writing process. But since they deal only with individuals selected on the basis of high productivity levels, their findings do not necessarily reflect the entire spectrum of the adult education professorate. The present study is viewed as an effort to build on these past efforts in order to broaden the current level of understanding relative to this research area and, therefore, compliment previous efforts.

METHOD

Using the instrument developed by Boice and Johnson (1984) as a point of departure, a questionnaire was developed to obtain descriptive information about professors writing patterns. The questionnaire was mailed to the 202 "full" members of the Commission of Professors of Adult Education as of October, 1986. A response rate of 52.5% was attained. This response rate can probably be attributed, at least in part, to the decision to trade off the possibility of doing a follow-up mailing in order to assure greater confidentiality by not coding questionnaires.

Of the 106 respondents, 83% were male, the mean age was 49 years, and 79% were at the rank of associate or full professor. When asked to identify their primary focus as either "practitioner" or "researcher/scholar," 29.5% stated the former, 59% chose the latter, and 11.3% wrote in both choices.

FINDINGS

Writing Patterns

As a group, the professors who responded to this questionnaire demonstrated a wide range in terms of the amount of time devoted to writing activity. When asked how often, in a typical week, they think about writing, 82% responded either "daily" or "several times per week".

How does this compare to the amount of time actually spent in writing? While 9.4% reported spending 11 hours or more per week on writing, nearly 30% of the group (29.2%) spend one hour or less per week engaged in such activity. The vast majority of professors (61.3%) spend between 2-10 hours on publishing. However, only 9.4% of the adult education professors reported spending 11 or more hours per week on writing.

A majority of professors (55.7%) reported their writing pattern to be "sporadic" while only 2.8% stated that they write on a daily basis. A rather large percentage (38.7%) claimed that they write either once or several times per week. In terms of when these individuals most frequently write, 1/3 of the respondents stated a preference for the morning hours. Only 16% preferred either afternoon, evening, or late night times. However, the remaining 51% expressed a preference for writing at a variety of times. This would appear to support the "sporadic" writing pattern noted above. Preferred locations for writing include home (54.7%) and office (28.3%).

A major aspect of the Boice and Jones (1984) study was consideration of various factors that serve as "facilitators" of writing. Three such factors considered in the present study include the use of motivating techniques, sources of feedback utilized in writing for publication, and the use of word processors. With regard to the first factor, the most frequently reported techniques were setting a schedule, seclusion, goal setting, and an upcoming conference presentation. Social pressure and rewards were used by relatively few of the respondents.

Several types of resources were identified. The most common of these, identified by 59.4% of the respondents, were other adult education professors. Other sources of feedback include editors and reviewers (38.7% for each), other professors outside of adult education (34.9%), students (28.3%), and support groups (10.4%). Finally, when asked about the use of word processors, over half (56.6%) reported that they "almost always" do so, while fewer than 25% stated that they "rarely or never" use a word processor.

Productivity

An important purpose of this study was to determine the actual publication activity of respondents in the three and one-half years prior to the study. During this period, the mean number of publications for respondents were as follows: journal articles (4.5); miscellaneous reports (2.1); conference proceedings (2.0); book chapters (1.5); book reviews (1.3); edited volumes (.9); and books/monographs (.8).

Perceived Value of Publishing Activity

To what extent do professors of adult education find value in writing for professional publication? Respondents were asked to consider the reasons they write, the pressure they feel about writing, the satisfaction derived from writing, and the extent to which writing is perceived to impact on teaching. Professors were asked to identify the major reason they write for publication. Nearly half of the respondents (47.6%) identified personal satisfaction/fulfillment as the primary reason. Other reasons cited include expectations for promotion and/or tenure (28.2%), financial gain (2.9%), pressure from colleagues (1%), other reasons (8.7%), and more than one of the above reasons (11.7%).

Do adult education professors perceive themselves to be under pressure to publish? Among this group, the pressure to publish seems to be very real. Nearly 70% of the respondents stated that they felt either a "great deal of pressure" or "some pressure" to publish. This would seem to compliment the above finding that a substantial number of individuals reported that the major reason they write is to meet expectations for promotion and/or tenure.

At the same time, however, it was noted that the major reason for writing was "personal satisfaction/fulfillment". Thus, it could be anticipated that a high level of satisfaction would be noted among professors who write. In fact, 59.2% stated that they derived a "great deal of satisfaction" from writing while 30.1% fell into the "some satisfaction" category. Only 10.7% stated that they derived little or no satisfaction from this activity.

Finally, a controversial question throughout academia is the link between research and teaching. In this study, respondents were asked to describe the extent to which they believe professional writing enhances teaching effectiveness. It was found that 80.2% believe writing to either "greatly" or "somewhat" enhance teaching, while 14.7% stated writing does little to enhance teaching and 2.9% stated that it actually detracts from teaching effectiveness. As the findings indicate, professors of adult education seem to feel that professional writing does have a positive influence on teaching.

Comparisons Among Variables

The above analyses offer descriptive information about writing practices and attitudes among adult education professors. It is possible to take the discussion one step further, however, by making comparisons on several variables. Spearman correlation coefficients were obtained between the four attitudinal variables identified above. Significant positive correlations ($p<.05$) were found between the following pairs of variables: amount of time spent thinking about writing and degree of satisfaction derived from writing ($r=.24$); amount of time spent thinking about writing and the degree to which writing is perceived to enhance teaching effectiveness ($r=.34$); and degree of satisfaction derived from writing and the degree to which writing is perceived to enhance teaching effectiveness ($r=.55$). No significant correlations were found with the variable of pressure to publish. These findings suggest that positive attitudes on one aspect of writing seem to carry over to other aspects.

DISCUSSION

What do these findings say about how adult education professors contribute to their professional literature? First, they suggest that there is a broad range in the attitudes and activities among this group. In terms of actual writing activity, the large percentage of the present group was very similar to the Boice and Johnson (1984) group. Sixty-one percent of the present group reported spending 2-10 hours per week on writing, as compared with 57% of the Boice and Johnson sample. However, considerably more of the Boice and Johnson sample reported spending 11 or more hours (9.4% vs. 28%) and a much larger portion of the adult education professors reported spending one hour or less on such activity (29.3% vs. 15%). While it is inappropriate to make direct comparisons between findings of the two studies, the fact that nearly 1/3 of the adult education professors reported devoting virtually no time to writing activity might be cause for concern to those who view writing as vital to the development of the field's knowledge base. At the same time, the actual number of publications reported suggests that professors are making an effort to build the literature through their contributions.

When considering possible implications of these findings, several questions come to mind. How adequate is the current level of scholarly productivity among adult education professors, especially given the practice orientation of the field? How might graduate preparation and faculty development programs facilitate increased publishing activity among adult education professors? What role might professional associations play in the future development of professional literature?

In terms of attitudes, while the large percentage of professors feel under pressure to publish, the vast majority cited personal satisfaction/fulfillment as the major reason they choose to write. This finding is particularly encouraging, given that a positive attitude would seem essential if the field of adult education is to assume a proactive approach to developing its literature base.

Finally, the findings relative to writing activity and perceptions of teaching effectiveness offer evidence relative to a question that has long been debated in academia. As the findings indicate, professors of adult education seem to feel that professional writing *does* have a positive influence on teaching. While it is often assumed that research and teaching are linked, there is empirical evidence to the contrary (e.g., Centra, 1983; Webster, 1985). The findings of this study seem to provide evidence in opposition to these views. However, two points must be kept in mind. First, the present study is concerned with professional writing activity in the broad sense, and not just *research*. Second, these findings focus on perceptions of respondents, not their "actual" behaviors. And while it can be argued that the perceptions of the individuals are as appropriate a measure as an "objective" assessment of actual behavior, further research would be appropriate before too large a claim could be substantiated relative to this issue.

As adult education attempts to expand its role as a field of study, the continued development of its professional literature base will be crucial. If adult education is to take a proactive posture with regard to this knowledge base, it will be necessary to have an increasing cadre of scholars contributing to the development of this literature. The findings of this study suggest that the potential for achieving this development clearly exists; however, it will be necessary to move beyond present productivity levels in order for this potential to be realized.

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RE-ENTRY FOR WOMEN: THIS TIME IT'S PERSONAL

by Shauna Butterwick

Abstract: A re-entry program training women for clerical work was studied with particular focus on the experiences of the the women who participated. Viewed from a feminist perspective the analysis revealed that tensions and contradictions exist between the goal of training women to be good employees able to re-enter the paid work force and that of achieving economic and social equality for women.

Background and Purpose: Over the last forty years there have been enormous increases in the numbers of women in the paid work force and the vocational choices open to women have also increased. However, women have had to make whatever adaptations were necessary in order to fit into the labour market. A noticeable phenomenon has been the increasing numbers of women re-entering the paid work force. Recently, the Canadian federal government reorganized its training and job creation efforts under an umbrella program called the Canadian Job Strategy (CJS), one of the components of which is job re-entry training for women. Critics of re-entry programs charge that there has been too much focus on training for clerical work which directs women into low paying job ghettos perpetuating the gender inequality of the labour market. The rationale given by government and program developers has been that clerical workers are in high demand in the labour market, and that therefore these programs are meeting the employment and economic needs of re-entry women. The purpose of this study was to explore a CJS funded re-entry program to seek further understanding of these issues from the experiences of the women who participated.

Theoretical Framework: The theories, concepts and ideology underlying this analysis have been grounded in a feminist perspective. Along with other feminist researchers I seek some understanding and explanation of women's oppression and for ways to empower and transform the lives of both women and men. My perspective is similar to that of other feminists (eg. Gaskell, 1983), in that I believe that we must not take for granted the organization of women's education and training, but rather, look at the structure of education and work and how it is negotiated between employers, government and educators. The central belief of feminism that has informed the development of the conceptual framework for this study is that women are oppressed and that this is not an inevitable situation but one that must be and is changing.

One of the major areas of the literature which offers an explanation of the dynamics of education and work in relation to women's oppression, is concerned with the integration of critical education theories, which include theories of reproduction and resistance, and feminist theory which makes the construct of gender central to the discussion. Reproduction theory is concerned with how existing structures maintain and reproduce themselves. Theories which acknowledge resistance are concerned with the ways in which both individuals and classes assert their own experience and context or resist the ideological and material forces imposed upon them. The work of McDonald (1980), Deem (1984), Walby (1986) and Weiler (1987) are examples of such reconstruction of established theories within a feminist perspective. Feminist theorists also acknowledge the importance of understanding power as a central factor in both reproduction and resistance to gender inequality. Power is also a process that is both subtle and obvious, and one which involves constant negotiation between the more and the less powerful.

Women have been and can be agents of change as well as victims of oppression. The works of such feminist scholars as Anyon (1983) and Davies (1984) have challenged theories which assume a rather simple relationship between sex-role socialization and women's oppression. These scholars argue that instead of successful socialization, there is a process of simultaneous accommodation and resistance. That is, there is an active response, not a passive one, to the contradictory messages presented to girls and women which inform them of the proper role and behaviour of females as well as the behaviour and qualities required for success in our society. Such resistance to these contradictions, however, does not necessarily lead to liberation, for this activity remains for the most part an individual and defensive reaction which maintains the link of the individual with their oppressor and undermines the solidarity of the oppressed. Research on consciousness raising has also informed this analysis by revealing the emancipatory process of the personal becoming political and the importance of combining individual action with collective action.

Methodology: Information was gathered by nonparticipant and participant observation, formal and informal interviews, and analysis of written program materials. These ethnographic techniques were chosen because they are particularly suited to research which attempts to seek understanding of the social phenomenon from the perspective of the participants or actors. Ethnography is part of the interpretive and phenomenological paradigm which holds that reality is socially constructed through individual or collective definitions of the situation.

Ethnographic research requires a continual process of analysis and self-reflection, a declaration to oneself and to others of one's ideology, biases, and agenda. In this connection, I found myself sympathizing with the participants of this program and at times critical of the program coordinators. However, I was also aware of the efforts made by these coordinators to create a woman-centred program while operating within the constraints of government requirements. Ethnography is a way of accumulating information about a group of people or culture that allows the "native" point of view to be revealed, but it also involves the interpretation of the researcher. What results is, in a sense, fiction. Although I refer to the voices of the women throughout this discussion, the interpretation is mine. The perspectives and stories of the women with whom I spoke and who I observed gives this interpretation meaning.

Description of Program: This research focused on a re-entry program funded by the federal government under the umbrella of the Canadian Jobs Strategy. The program was developed by a private company with some experience in offering similar training programs. Criteria for entrance to the program included previous office work experience, less then 20 hours a week of paid work in the previous three years, a minimum of grade twelve education, and adequate English language skills. The government also required that for this group, one third of the participants were to be women receiving social assistance and one third were to be from visible minorities. The government provided a training allowance for all the participants to cover costs of transportation and clothes. They also received support for child care costs.

The program consisted of 26 weeks of training. Approximately half of the time the participants were in the classroom ('off-site' training), where they identified their transferable skills, learned proper office etiquette, were given suggestions for dressing for work, were given information about violence against women, labour market statistics, and job hunting strategies, and were trained in typing and computer skills. The rest of their time was spent with a host employer where they received on-the-job ('on-site') training. There were twenty-seven women who participated in the program. Several of the women did not fit the criteria exactly since they had worked previously as professionals in other fields such as education and accounting. Their economic situations varied from upper middle class to single parents on welfare.

Discussion and Interpretation of Findings: The study provided a rich collection of information. For the purposes of this paper I will briefly discuss several central themes which emerged in relation to the theoretical framework. Was there evidence as a result of this analysis that this program was reproducing gender and social inequalities or did this program create opportunities for the participants to gain economic independence? At one level of analysis the program did meet the needs of the participants: to update and acquire new skills, increase their self-confidence and self-esteem, and improve their chances of finding a job. The majority of the participants reported that they had improved and acquired new skills and felt their self-confidence had increased. Over 80% of the participants found paid employment of some kind within a month of completing the program. A follow-up study is under way to determine the nature of their employment, whether it was short term or long term, what kind of wages and benefits they received, and whether there was opportunity for advancement.

However, considering this program within a larger context and in relation to my theoretical framework, it appears that this training also reproduces the status quo in relation to gender inequality. The issue is one of power. Ultimately the content of these programs is determined by the labour market, which demands that women who have been out of the paid work force obtain training and experience before they are hired. As is the case with business and vocational courses in high school, the government provides re-entry training for women because for most "female-dominated" jobs the employers expect that these workers begin with a certain level of training, and because these same employers do not offer on-the-job training. It is still the case that many women must leave the work force to care for their families. The same women must then seek further training before re-entering. That is, the work place remains basically unchanged, as do the unequally-shared responsibilites of the home and family. The gender stratification of the labour market is thus perpetuated since women seek clerical work because it offers the kind of situation that accords with their dual home and work responsibilities. In this way employers are in a position to keep wages and benefits at a low level because of the availability of a large pool of workers.

In addition to evidence of the reproduction of gender inequality, I also found that some of the participants were also experiencing discrimination based on age, race, and class. In order to be funded by the government for such re-entry training programs, trainers or coordinators must achieve an 80% success rate, that is, at the end of the program 80% of the participants must be employed. In order to meet this requirement and thus continue to be funded, coordinators and programmers learn to identify and select only those women whom they believe will be "successful" participants. As a result those women who are already economically, educationally and socially advantaged are selected. In order to meet the government requirements, a certain percentage of women on social assistance and those defined as a visible minority were admitted to the program. However, it was these participants who had the most difficulty during the training. Two of these women dropped out of the program. Several of the women who had English as a second language reported feeling discriminated against by their host employers and when they were job hunting. Two women who were in their fifties, both with extensive work experience, reported discrimination because of their age.

In this study I also identified contradictions in the messages given to the women, as well as a variety of responses and different levels of awareness of such contradictions. The coordinators of this program did make great efforts to establish a woman-centred approach throughout the training. They repeatedly emphasized that re-entry women had much to offer the work place, that is, their skills and experiences as homemakers and mothers were valuable and transferable. They also included discussions of issues such as sexual harassment, ways to reorganize their home life such that responsibilities were more evenly shared with husband and children, assertiveness training, and their rights as employees. Other information that was given, however, seemed to contradict this woman-centred approach. The government required that during the classroom or 'off-site' training, attendance was to be taken. In addition to this, the participants were informed of the 'legitimate' excuses allowed for absences. Even though these women were told that the work place needed their 'human' and 'personal' skills, they were given at the same time lectures on how to answer the phone. The participants were informed that employers had a right to be apprehensive of hiring re-entry women, women who were used to being in charge at home yet were apparently not ready to take orders or get to work on time. The session on how to dress for work was particularly interesting. For example the participants were told not to dress and act like housewives, while at the same time the proper wardrobe recommended for the work place would require a level of income far greater than the wages they were told to accept.

I also found many examples of discourse which indicated how the labour market (and the family structure) maintain the separation of the public and private spheres. For example, it was communicated to these women that employers were reluctant to hire re-entry women because they feared that family concerns would interfere with the woman's ability to attend to her work responsibilities. It was emphasized repeatedly that the participants must organize their domestic responsibilities so that child care and other concerns would be well under control even before they began the training program, and particularly once they began working. It was frequently reiterated that in order to be successful in the workplace one did not mix work and personal life.

How did these women react to such contradictory messages? Occasionally the women would respond directly in class but, for the most part they made no direct comment to the instructors or coordinators. However, during coffee breaks and lunches they would discuss at length the way they were treated by a visiting instructor during their typing and computer training session, frequently asking me for my opinion. Most of the women described the dressing for work class as very interesting and helpful, but there were a few who had challenged the instructor. Despite repeated admonishments to the women to take care of their domestic problems outside of the classroom several of the women who had family problems and 'difficulties with finding adequate child care continued to openly discuss their situations in class. Other forms of resistance included not showing up for class, failing to hand in assignments on time, and requests for a change in host employers.

There was also evidence of negotiation, that is, this program was not simply imposed upon the participants. I found that there existed a process of both obvious and subtle efforts at negotiation between the participants, their families, the coordinators, the host employers, and the government. The coordinators reported that this particular program had been altered based on responses and requests from the previous trainees. For this particular training, participants kept journals during their 'off-site' training in which they communicated their concerns and requests to which the coordinators would given written response. Occasionally the coordinators used the comments in the journals to initiate class discussions. The participants also negotiated where they would be placed during their off-site training. Those women who complained about their off-site training were either relocated or the employer advised by the coordinators to improve their training efforts. Negotiation was also apparent during the final part of the classroom training during which participants were sending resumes and going for job interviews. Many of the women reported on the demands they had made to the interviewers about salary, benefits and working conditions. Several women on social assistance reported to me about successful and unsuccessful negotiation with government services, particularly regarding finances and child care. Most of the participants also reported on their efforts to negotiate with their husbands and children regarding home responsibilities.

Was there evidence of consciousness raising? Did these women begin to see their personal problems as connected to larger structural inequalities? When they began the program most of the women described their needs as personal. For many of the women, however, working and sharing as a group was a new experience. Most participants remarked quite spontaneously to me that they were beginning to realize that their problems were also experienced by others. What surprised many of them was that even those women who seemed to be in better financial situations had similar fears and difficulties. Many of the women began to meet together socially and several formed close relationships with other participants. They frequently commented on their friendship and relationships to each other when I asked them what had surprised them the most about the program.

It seems, therefore, that for most of the women in this program the opportunity to work together with other women was a consciousness raising experience. The extent to which this new awareness of women's shared problems was translated into action is difficult to assess. There was certainly evidence that these women began to demand a certain level of training and experience when they had the opportunity to learn what others were receiving. At one session in which they were to describe what benefits and working conditions they would like they created a list that included many feminist demands for changes in the work place. The follow-up study should help to reveal their successes at practicing their new assertiveness, awareness, and skills in creating new work environments to meet their needs.

Implications: There are many suggestions that can be made regarding the implications for practice, research and policy. Only a few will be outlined here. I would encourage greater attention be given to developing more innovative re-entry training programs that do not perpetuate women's returning to low status, low-paying work environments - programs that develop skills in establishing a business or that train women for managerial positions. Greater efforts need to be made to establish training in unionized work sites. Programs should encourage and facilitate consciousness raising through group work and group problem-solving.

Further study is needed to evaluate the outcome of these programs as well. What kinds of employment do these women secure? Is it short term or long term?. Is there evidence that, as they have been led to believe, even though they must begin at the bottom again there will be opportunities for advancement and promotion? Under what conditions do these women resist the sex-role socialization of the work place? Studies are needed on programs which aim to inform the participants of the structural inequalities of the labour market and which develop confidence and skills in demanding change in the workplace. More research is needed on the impact of policy and administrative decisions on the development of training programs for women. Further exploration is also required to examine the way in which the labour market and the family work together to keep the private and public spheres separate. In general, research should continue which explores the relationship between macro and micro factors affecting women's participation in job training and their "success" in the labour market. Those that are involved in research must communicate with both practitioners and policy makers.

Attention should be given to the development of policy that provides resources for 'bridging programs', that is, programs for those women who do not meet the current government criteria for re-entry programs and those who do not succeed in the established programs. The federal government should establish a policy which provides incentives for employers in female-dominated work places to offer on-the-job training. Feminists should actively lobby policy makers and inform them of research that identifies the relationship between the labour market, training and women's employment. Finally, the Canadian government should implement a policy of equal pay for work of equal value.

Summary: This study found evidence of reproduction, contradiction, and negotiation, as well as resistance, empowerment, and consciousness raising. The analysis emphasizes that the relationship between women's training and the labour market cannot be understood without recognizing the complex interaction of many factors. Although the analysis gives support to arguments that federally funded re-entry training for women perpetuates gender inequality in the labour market, it also reveals the process as one of constant negotiation and resistance. Criticism of these programs should be grounded in an understanding of the power structure, that is, the many decisions made at the policy and administrative level which have implications for whatever sector develops these programs - private or public. As feminist educators and researchers we can use this knowledge to identify the various levels at which change is required. Feminist analysis can support the creation of the 'discourse of possibility' since "learning and teaching can take place in the interests of human liberation, even within institutions created for social control" (Weiler, 1987, p. 152).

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SELF-DIRECTED LEARNING: THE QUALITY DIMENSION

Rosemary S. Caffarella, Associate Professor, Virginia Commonwealth University, Richmond, Virginia.

Judith M. O'Donnell, Vice President, O'Donnell & Associates, Inc., Midlothian, Virginia.

Abstract: Provided in this study is a description of how one group of adult learners, training professionals, define and evaluate the quality of their work related, self-directed learning activities. Data were collected via focus groups and analyzed using the constant comparative method of data analysis. Ten themes that emerged from the data are outlined, followed by a discussion of the issues and implications for research and practice.

The phenomenon of self-directed learning has received considerable research attention from adult educators. One major category of research in this area has been focused on the nature of the process of self-directed learning (Caffarella & O'Donnell, 1987). As part of this stream of research, a number of researchers have raised the issue of the quality of self-directed learning, quality in terms of both the process and the outcomes of that learning (Brookfield, 1984). The purpose of this study was to provide a description of how one group of adult learners, training professionals, define and evaluate the quality of their work related, self-directed learning experiences. The study was built on three major assumptions: 1) Any initial study of the quality of self-directed learning must be framed from the point of view of the learner, and not the educator, although the educator's view is also important. 2) There appears to be an interrelationship between the quality of the process of self-directed learning and the outcome of that learning, and thus both should be studied simultaneously. 3) The level of a learner's experience with the content of the learning (in this case, work related learning) may effect how the learners view the quality of that learning.

Focus and Methodology: The research was based in the qualitative paradigm. The population for the study was the Greater Richmond Chapter of the American Society for Training and Development. Using a systematic procedure, 100 names were randomly selected from the Chapter's membership directory. Potential participants were contacted by letter and phone until a pre-determined acceptable sample size (32 to 48 participants) were obtained. Subjects were assigned to one of four focus group sessions, two of which were for learners with four years or less experience in the field, and two for learners with more than four years experience. There were a total of 43 people who agreed to participate, 18 with less than four years experience and 25 with more than four years experience. However, a snow and ice storm and professional emergencies reduced the sample count to 33 participants, 12 with less than four years experience, and 21 with more. The sample included 67% female participants and 33% male. The majority of the participants, 57%, were employed in business or industry; 13% each were employed in either public agencies or with consulting firms; with the remaining 17% in association/ non-profit, or listing "other" which included higher education and secondary education. In terms of educational background, nearly half (44%) held graduate degrees; 28% were graduates of four-year institutions; 16% held advanced graduate degrees; while 6% each held either a two year degree or a high school diploma. These trainers spent the largest proportion of their work time on instruction, followed closely by managing and coordinating Human Resource Development (HRD) programs and staff.

Each researcher was responsible for conducting two focus group sessions, one for each experience level. To ascertain what questions needed answering in terms of the quality dimension, a letter was sent to 13 experts in adult education with specific interest in self-directed learning. Twelve adult educator's answered the query posing questions and problems to consider in the research. Their responses were subjected to analysis based on a review of available research, and the final broad interview questions were developed. These were: 1) What is a quality self-directed learning experience? 2) Do you always achieve quality? 3) Who should determine quality? 4) What is quality (summary group analysis)?

The four focus group sessions, each 1-1/2 to 2 hours in length, were tape recorded. Verbatim transcripts were separately analyzed by each researcher using the constant comparative method of data analysis. The researchers then met to compare content findings and negotiate the final categories. The data were then divided into the agreed upon categories and analyzed to determine the patterns and themes related to the quality dimension of self-directed learning. As no major differences in quality issues or concerns were noted between the two experience levels, the data were combined for purpose of analysis.

Themes that Emerged from the Data: There were 10 interrelated themes that emerged from the data which have bearing on the quality dimension: 1) the end product; 2) the learning process; 3) control of the learning; 4) individual motivation or interest; 5) customer orientation; 6) resources; 7) affective side of quality; 8) self esteem; 9) levels or variations in quality; and 10) measurement of quality. These themes encapsulate the important issues and concerns of the participating training professionals. In each of the four focus group sessions, the participants initially mentioned the end product of the learning as the gauge of quality. Through further group discussion and interaction, quality was then seen to have more aspects or dimensions than the "results" orientation.

Theme 1: End Product. The participants put emphasis on the end product or outcome of the learning experience as an important gauge of quality. As one participant noted, "When I think of quality I think of... did I learn what I needed to learn to meet the objectives I had going in...did I get the answers?" Another participant suggested, "...quality is pretty easy to determine, either I know it or I don't." The groups also suggested that the learning was a quality experience if they were "using" what was learned, or if they were able to "recall" it in work-related conversations.

Theme 2: Learning Process. Many trainers equated quality with the process of "putting a learning project together," "thinking it through" and "drawing conclusions."

> So I take a lot of responsibility for planning and choosing and strategizing about my learning before I really get into it and I think that is assuming responsibility for my learning. And in that way as I follow through, it's more likely that I'll have a quality learning experience.

A number of participants agreed with the trainer who suggested that process was at least as important, if not more important, than outcome, "So if I'm really measuring quality of that learning, even though I got my answers, I may still say there's got to be a better way. This can't be the best way to do it."

Theme 3: Control of the Learning. Within this category, the participants felt strongly that the very nature of a self-directed learning project demanded learner control, and that in the final analysis the learner was the judge of the quality of the learning. As one trainer suggested, "...the older I get, the more I realize the importance of that, my being in control, the satisfaction that's there from being in control."

> I guess my point here is that I think I'm the judge of my self-directed learning because that's basically what it is. I'm a self-directed learner...to me [that's] doing what I want to do to achieve a goal, and not what someone else tells me to do. So I think I'm the judge of self-directed learning and quality.

There were other participants who felt somewhat differently as characterized by one of the respondents. "If it is work related it would be hard for you to judge the quality without taking into consideration feedback you could get," feedback from one's boss, the customers and/ or other colleagues. Yet there appeared to be consensus that if there were external accountability in relation to the learning, the self-directed learner still needed to maintain the control.

Theme 4: Individual Motivation and Interest. The participants suggested that the quality of their learning was directly related to their motivation and interest in either the subject matter itself or what the learning would do for them in the job context. For example, "I was self-motivated and self-directed to learn it and I knew it so well that I could say it backwards, upside down, inside out." While another suggested, "I guess quality for me in self-directed learning is directly related to my own motivation for that particular activity. And I'll do the other things that I need or must do, but they're not done as well." It would appear that motivation and interest cannot be forced, "There are other times that I wasn't motivated...so the quality wasn't there even though it may have been under my control to change that to make it a better quality learning effort."

Theme 5: Customer Orientation. The bottom line for these training professionals seems to be summed up in the statement, "...self-directed learning is lots of fun for most of us but we always have to start listening with the third ear, it's not just for us...how is this going to be received?" The trainers appeared to feel that if their customers, who for the most part are the trainees or other managers, do not have a quality learning experience then the quality of the trainers self-directed learning was inadequate. As one trainer suggested, "...my measure of quality is when I've learned something I feel that I can turn around and help someone else to learn the same thing and feel comfortable doing that." Many seemed to equate this measure of quality as the "obligation" the trainer has to the organization and to the clients or students. They saw quality as more than getting the information or answering the questions but "quality is also being effective enough so that the party who is going to receive the other end of my program sees it from the same perspective."

Theme 6: Resources. It was apparent that quality was related to the availability of resources and the time pressures imposed on the researching/learning curve. The same idea appeared over and over , " if you know what resources are available, that's a step in the right direction." Yet finding those resources for many was a problem. "I'm sort of hit or miss, but I keep going until I get a hit." "...where I get quality self-directed information is something that gives me the answer and doesn't waste my time looking through a lot of junk...It's hit or miss."

Theme 7: Affective Side of Quality. There appears to be an important emotional side to the quality issue. One participant suggested, "I can't define it, but I know it when I see it;" while others attempted to define the feelings in such terms as "fun," "self-satisfaction," "a new area of pleasure," or being "comfortable" with information. These affective dimensions appeared to have bearing on both the process and product of the learning. The importance of feeling satisfied seemed to be an especially important affective dimension.

Theme 8: Self Esteem. Though related to the affective side of quality, this theme was strong enough to warrant a separate category. For this professional group, the quality of their self-directed learning was also related to their own self esteem. These trainers have to learn many new or unfamiliar concepts throughout the year in order to conduct their training programs and other activities. The fact that they can do the learning is important to them, and is tied to their definition of quality. The theme seems to be a reflection of the persons confidence in his/her own initiative and capability and in the worth of his/her effort. "So that's another part of this, feeling good about yourself." "It makes me feel good ...It's a growing experience, its a growth mechanism." "It's like, Hey, I can do it."

Theme 9: Levels or Variations in Quality. Each of the focus groups suggested that quality is relative to the moment, to particular needs, or to desired outcomes.

> So if you're going to measure quality, there are varying degrees in that quality to be achieved. Maybe I can say it's high quality based on what I had to know to present to the new learner, but it's not quality if I had to really present this to a power user [computer example]. So the level is different, the quality is different. [But] I believe the quality is there.

The participants appeared to suggest that a lesser quality of effort did not mean that the final project was not quality. For example, "So when we talk about quality in self-directed programs a lot of times there are satisfactory outcomes just to certain levels..." It would appear that sometimes the level is imposed by time pressures, "I have to hold back because you have other things that you have to get done." While other times the level of quality is imposed by choice, "I also think that some things that I pursue with a hundred and ten percent and some things I just don't think are that necessary to give that much, so I give sixty percent. It depends on why I'm going after it."

Theme 10: Measurement of Quality. The measurement of the quality of their self-directed learning appears to take place over time.

> I think there are two...instances in which quality can be measured. For me it's the immediate...one of the points is immediately after

> you've gone through a self-directed learning and you say °Gee, this has been really great; I've learned something, it's a quality piece of work' and stuff like that. Then you go out and try to put it to use and you find out °Hey, guy, you're about sixteen or eighteen dollars short there.

Most of the participants seemed to agree that this customer orientation was a "reality check" and could change their initial reactions to how they perceived the quality of their learning.

Discussion and Implications: The participants in this study clearly reported the individuality dimensions of quality in self-directed, work related learning. Learner control of the learning project and its evaluation were important elements of the quality of the experience. Levels or variations in quality were viewed as natural and inevitable. This orientation is presented in other adult education writings. Forest (1976), for example, suggests that people will place varying values on program's outcomes depending on their particular needs, expectations and experience. "Program evaluation must be designed by the program situation and the people in it if real value is to be determined" (p. 168). It would appear that this statement could be said of the quality dimension also. Thus, when evaluating the quality of work related self-directed learning, the individual needs and motivations of the learner are important as well as the contextual situation in which the learner finds him or herself.

Many authors (Harris & Schwahn, 1961; Smith, 1982) suggest that the outcomes of learning are difficult to define because it involves multiple aspects. These aspects have been categorized as learning product, learning process, and learning function. This focus group analysis tends to position these same categories as predictors of a quality learning experience for training professionals. However, it would appear that the learning functions, those critical aspects of learning such as motivation, control, transfer, and so on, are each legitimate and important criterion in their own right and should be studies further as distinct variables.

Within the process aspect the ease of locating appropriate resources seemed to be a key to the participants as to whether they termed their self-directed learning activities quality experiences. Their sentiment echoes a number of authors (Brookfield, 1981; Tough, 1978) findings in this area, that adult learners do need help in finding useful learning resources. Many of the participants in the study noted a possible role for their boss and/or colleagues in assisting with this search for good resources.

The affective side of determining quality was very important to these respondents. The sense of feeling satisfied with both the learning process and the outcome, whether it be recognized by others or not, was definitely evident as a determinant to a quality experience. Hassen (1982) also found this variable of satisfaction to be of importance to those who were labeled as highly self-directed learners. In addition some of the participants linked this sense of self-satisfaction and accomplishment to a further development of their own self-esteem and self worth. This later linkage has been made with formal learning, but has not been studied as a possible outcome of learning than is self-directed in nature.

The strong sense of interconnectedness the respondents felt toward their "customer groups" in relationship to the quality of their own self-directed learning efforts was for these authors almost astounding. Though the general opinion was that they should be in control and the judge of their own self-directed learning projects, that judgement could and did radically change based on how the information was received by those they trained and/or consulted with in the organization. Though evaluating the quality of more formal learning programs is often measured by the effects the program has on others (Kirpatrick, 1976), this has not usually been the case in conceptualizing learning of a more self-directed nature. One explanation for this finding with this group is the self-directed learning activities studied were work-related and this would probably have more of a customer orientation, especially in a primarily service orientated profession, such as represented by the training and HRD specialists.

A number of implications emerge from this study. On the more practical side it appears that people do need assistance in finding and using resources for work related, self-directed learning activities. There appears to be a role for adult educators to assist both the learners themselves and their supervisors with this important aspect which appears to directly contribute to the quality of those self-directed learning experiences. How this can best be done is open to question and further study.

In relationship to further theory building and research in terms of the quality of self-directed learning, three major questions emerged: 1) Are there base line or common indicators of quality for the phenomena of work related, self-directed learning activities? 2) How might these indicators differ if variables such as level and type of work (eg., professional verses technical) were brought into play? and 3) Are there base line or common indicators of quality for all types of self-directed learning, whether this learning be work related or for more of a personal satisfaction?

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UNIVERSITY BASED CONTINUING PROFESSIONAL EDUCATION - MORE THAN MEETS THE EYE

*Kaireen M. Chaytor, M.A.
Graduate Student, Ph.D. Program
Department of Education, Dalhousie University
Halifax, Nova Scotia, Canada B3H 3J5

Douglas V. Chaytor, D.D.S., M.S., Chairman
Department of Restorative Dentistry
Graduate Student, M.Ed. Program, Department of Education
Dalhousie University

Dale H. Poel, Ph.D.
School of Public Administration and
Department of Political Science
Dalhousie University

The paper explores the possibility for reconceptualizing the rationale for university-based continuing professional education. Data gathered by a survey of practising dentists and faculty members participating in a University continuing education program were analysed for evidence of the program's contribution to university-community relations.

* Presenter

UNIVERSITY BASED CONTINUING PROFESSIONAL EDUCATION - MORE THAN MEETS THE EYE

THE PROBLEM

The evaluation of professional continuing education has emphasized course satisfaction and knowledge outcomes with some attempts to measure practice change. Continuing education programs situated in universities can be evaluated for benefits other than the traditional measures of dispensing knowledge, changing practice, and, in the case of this study, improving health care.[1] The research presented here addresses this possibility.

Continuing Education in a university setting can be an important positive influence on university-community relations, while also providing positive stimulating experiences for faculty. Clearly, this dual potential is important in these times of diminished financial support for universities. The authors suspect many continuing educators believe in this potential but have not documented it. Program budgets and attendance statistics are probably the most commonly used institutional measures of success for continuing education programs. The justification for a university-based program might reasonably be expected to go beyond these measures. This study illustrates the value of a continuing education program to a university on the basis of two aspects: (1) the continuing education program is a vehicle for university contact with its community of practitioners and (2) faculty participation in the continuing education program is a source of their professional development.

The need for universities to be responsive to and integrate with their communities is argued in a report of the Organization for Economic Cooperation and Development (OECD)[2]. The OECD Study on changing relations between universities and communities notes "Utilisation by the university and the community of each other's resources is one of the main ways in which the university can respond to the expectations and needs of the community and to the pressures it exerts". The study defines one issue as: "Communities have problems, universities have departments". The report proposes a transformation of the university-community relationship to one that is interactive and informative through responses to community needs by problem-oriented, mission-oriented research.

While the OECD report asked that the university-community linkage be changed, Schon[3] urges professional schools to seek new understanding of the school-practitioner linkage. He argues that education for the professions should recognize real world problems are ambiguous, indefinable, unpredictable and rarely fit the neat categories that shape the disciplines. Because professional education is in institutions, we have come to view professional expertise as comprising mastery of techniques and theories derived from

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The University referred to is Dalhousie University, Halifax, Nova Scotia, Canada. The primary region served is the four Atlantic Provinces of Canada. These names are not used throughout the text in order to emphasize the generality of the concepts presented.

scientific research undertaken mainly in the institutions themselves. Schon sees the need for competency in this knowledge and technique but also sees the need for authority to be based on 'reflection-in-action'.

Reflection-in-action is simply practitioners understanding their settings by undertaking on-the-spot investigations through a conscious and deliberate process. This requires a number of conditions. First, the relationship between university and practitioner must be one of exchange, not consultation of the powerful by the weak. Second, research should be viewed as a task shared by practitioners and academics triggered by features of the practice situation. Third, to facilitate reflection-in-action, institutions must place a higher priority on flexible procedures for evaluation, permitting knowledge from practice to inform judgment in the universities. Therefore we must seek new ways of measuring and understanding the role of continuing professional education programs as a vehicle for university-community relations.

This study attempts to contribute to a reconceptualization of the rationale for University-based continuing professional education. It sought evidence of the benefits of the program to the University through an exploration of the various factors important to practitioners and faculty. The two aspects of the study, practitioners' perceptions of continuing education and faculty perceptions of their participation in continuing education, can provide complementary evidence of the benefits of a continuing education program to University-community relations.

METHOD

The program studied was the Continuing Education Program in the Faculty of Dentistry, Dalhousie University. Two surveys were employed in this study, a survey of practising dentists and a survey of faculty engaged in delivering the continuing education courses. The dentists (N=148), selected from a total regional population of 724 dentists, were all the alumni who graduated in the years 1965 - 1974 and who were located in the primary region served by The University. Thus the population of dentists all had opportunities to attend courses sponsored by The University over a period of at least 10 years. During this period, 1974-1984, 97 courses were offered on campus, and 52 were offered off campus for a total of 149 courses. Only five dentists did not attend any courses and 59 attended 10 or more courses. Mean attendance of the surveyed population was 8.3 courses. These attendance figures illustrate that the surveyed population was familiar with courses presented by The University.

The questionnaire to practitioners was mailed with a return envelope addressed to an external agency to assure anonymity. The questionnaire asked practitioners for a profile of the location and style of their practices. It asked them about their need for continuing education and the reasons they felt they required continuing education. Ratings of the usefulness, the effect on quality of care and the extent of the dentists' use of various sources of continuing education were gathered. The dentists were also asked to rate the programs offered by The University on the basis of several characteristics. Other forms of contact with The University were also assessed.

The faculty selected were on staff and presented in the program in the years 1983 - 84, and 1984 - 85 (N=36). They were surveyed for their perception of their involvement in the program. The questionnaire to faculty was distributed through internal mail with the request that it be returned to the secretary in the Continuing Education office.

The initial responses for both questionnaires were on a 5 point scale with 1 equal to low and 5 equal to high. For ease of presentation 1 and 2 scores were combined for low, 3 left equal to moderate and 4 and 5 were combined for high.

RESULTS AND DISCUSSION

a) Practitioner's Survey

Ninety-eight practitioners completed the questionnaire. This was 66% of those surveyed. Most practitioners perceived their participation as average despite expressing a high need for Continuing Education. Adult education theory may explain this finding, as a very normal response. The very presence of continuing education courses will cause people to posit the need for more education and assess their participation level at some perceived norm. Ninety-two percent used the Continuing Education activities sponsored by The University to at least partially fulfill their Continuing Education requirements and 70% reported The University courses accounted for at least 50% of their attendance.

More than one-half (59%) reported a high effect on the dental care they provided; only 11% said the courses had little effect on their dental care services. More specific reasons for participating in continuing education were assessed by practitioners. The strongest emphasis was given to "gaining knowledge". Over 80% gave this category a high priority. Fewer practitioners (40%) gave a high requirement to learning the "rationale for clinical procedures". Improving and changing skills and reinforcement of procedures were in the middle range. This overall pattern reinforces the role of The University in continuing education because it is in a region with a small population and is probably the best prepared of all providers to deliver knowledge.

Practitioners gave high ratings (69%) to university courses when asked what they perceived to be the most useful source for continuing education. Dental society courses, professional books and journals were next in line with high ratings by 52% and 48% respectively. Trade journals and sales representatives received low ratings for usefulness. The most highly used method of Continuing Education was reported to be university courses with journals and books following closely behind high ratings by 59% and 54% respectively. Dental Society courses got a high use rating by only 35%. Commercial courses were used relatively infrequently, but they are not widely available in the region surveyed.

Respondents were generally positive in their ratings of various aspects of the program offered by The University. The convenience of scheduling and location of offerings were rated most highly by the majority of respondents. While scheduling and location are not the reasons that speak to the academic quality of the courses offered, these factors are important in the context of a geographically dispersed group of practitioners. This places certain obligations on a university to provide courses of high academic quality, and not be misled into using attendance figures as the sole measure of the quality or value of the program.

Practitioners appear to have little contact with the University other than continuing education. High ratings ranged from only 1% to 9% for contact through library, alumni office, cultural and sports events. Since only alumni were surveyed, this finding is important because universities generally believe in the value of continued contact with alumni. Continuing education takes on added significance as a link between the university and its community in light of the low contact levels reported for other areas.

b) Faculty Survey

Twenty-four faculty (66%) responded to the survey. While almost all respondents had made presentations on campus, half had also presented off campus. Off-campus locations could be from 60 to 800 miles away. Two-thirds of the respondents had also made presentations prior to the period surveyed (1983-85). Almost all strongly supported the University's role in providing a regional continuing education program and none were critical of the University's role.

Original work, private practice experience, and the expansion of undergraduate course material, the most frequently cited sources of continuing education course content were given high ratings of 55%, 46%, 43% respectively. Previous continuing education presentations were less important sources of content or audio-visual materials. The relatively small practitioner target group limits the opportunity to repeat course content, in contrast to larger professional communities. The use of materials from private practice by clinical faculty reinforces the value given to private practice experience by The University.

The faculty delivering the continuing education courses also learn from the practitioner. While faculty indicated feedback on specific practice problems relating to the topic presented were most useful (high 52%), they also recognized feedback on general practice problems, the general direction of dentistry, and the role of The University's Faculty of Dentistry. Although audience feedback did not rate highly as a source of research ideas (high 9%), the authors believe this question merits further investigation, particularly with faculty actively engaged in clinical research.

Faculty recognized a wide range of benefits resulting from their participation in the continuing education program. The greatest benefits were the stimulation from meeting practitioners and learning about practitioners' problems. The continuing education experience also was important for understanding the regional differences in practice.

Over 90% of faculty intended to use continuing education materials in their undergraduate teaching. Continuing education clearly enhances this regular teaching. This is particularly valuable, when the originality of continuing education content and teaching materials is recognized.

CONCLUSIONS

Our study examined the assumption that university-community interaction is a desirable goal. The responses pointed strongly to some particular attitudes and behaviours. Practitioners indicated:

i) continuing education is considered important;

ii) continuing education opportunities sponsored by The University are the most important source of continuing education in the region;

iii) convenience of scheduling, location and input by local groups are important;

iv) the continuing education program offered by The University provides the main, if not the only, contact between alumni and The University.

The responses by faculty point out:

i) they receive a high level of stimulation and perceived benefits from their involvement in continuing education;

ii) new material prepared for continuing education presentations is used in their teaching to undergraduates.

iii) continuing education helps faculty to develop an understanding of regional problems, to meet practitioners, and to learn of practice problems.

In summary, faculty members reported that continuing education results in beneficial relationships and they are prepared to interact with the community of practitioners in this way. This interaction, in the positive environment of continuing education, results in practitioners having continuous influence on a university. Faculty are receptive to the influence and are stimulated by their continuing education experience. University continuing professional education programs could therefore be studied for their potential to enhance university-community relations.

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FROM THE TEXT TO THE ADULT LEARNING TRAJECTORY

Adèle Chené, Associate Professor, Université de Montréal

Abstract: The purpose of the research is to build from an analysis of adults' narratives a model of adults' trajectory of learning. Hermeneutical in its approach, it relies on structural analysis for its method.

Based on the premise that learning brings about a transformation and that adults have access to that transformation in their experience, the present study is aimed principally at understanding the kind of transformation that is associated with adult learning experience and the relation between that experience and the continuity of the adult's life. Three questions are posed: how is the continuum of the adults' learning experience developed; how do adults see themselves as learners and see learning in relation to their personal commitment to learning; what is the meaning of the transformation brought about by learning?

It was assumed that answers to these questions would eventually lead to a model of the adults' learning experience, were it possible to combine interpretive and theory-building dimensions into the research. It was also assumed that there was a link between experience, or action, and narrative, which allowed the researcher to go from one to the other: "Before we dismember them analytically, and even before we revise them retrospectively, our experience and our actions constitute narratives for us." (Carr, 1986: 69)

Theoretical Context

Adult education research has in recent years resorted to autobiographical accounts and life-stories because they were thought to provide data for the analysis of the learning experience (Pineau et Marie-Michèle, 1984; Dominicé, 1982, 1985; Josso, 1984), and because they "could have applicability to a wide range of adults" (Warren, 1980). The relationship between oral life-story and autobiography has been discussed (Pineau et Marie-Michèle, 1984), but no research in adult education has as yet used pragmatics to contextualize the oral data in the dialogue between the subject and the researcher, nor has it discussed the status of the subject as referent of the life-story or autobiography (cf Bourdieu's discussion of the autobiographical illusion, 1986).

Although the present research is related to other research in adult education through its concern with understanding the adult learning experience and through its similar use of autobiographical data, it differs from previous research by its adoption of a hermeneutical approach.

According to Ricoeur (1986), the task of hermeneutics is twofold: to reconstruct the internal dynamics of the text, and to discover the world which the text has the power to project beyond itself. It is implied that some experience precedes language and calls it into being, that there is some experience before and beyond language. The reconstruction of the dynamics of the text puts the researchers at the juncture of understanding and explanation; they need to be able to discover the meaning which is structured by the text itself and to sort out textual elements and strategies by which meaning is structured in the text.

At the outset of the research there was an intention to break away from the psychological and naturalistic interpretation of experience and to establish a basis for an interpretation which would rely both on objective data analysis and subjective understanding of the learning experience. Following previous research (Chené, 1985), there was also some preoccupation to discover a sound theoretical basis for the interpretation of narratives.

Discussing the relation between understanding and explanation, Ricoeur (1986) points to a convergence of the theory of the text, the theory of action, and the theory of history. A synthesis of these three dimensions is used here as a basis for the hermeneutical approach of the research and its use of learning narratives.

According to Ricoeur (1986: 163-168), the theory of the text provides a starting point for the reconsideration of the relationship between explanation and understanding. Semiotics has developed models congenial to the domain of language to explain the relation between the elements of the text. Explanation may be concerned not only with the regularity of occurrences of events, but also with the stability of correlations in the text. In that respect, structural models, as found in semiotics, may serve as support of an interpretation other than naturalistic. In an oral dialogue questions and answers ensure complete understanding; in a written text, the situation is different because the interpreter cannot question the author about the intention. What is to be understood in the case of the narrative is not the psychology of the author behind the text, but what is presented by the text itself. The narrative is seen by Ricoeur as a creative imitation of human action. Structural analysis provides a procedure for access to the meaning of the text via the narrative codes, the same way that grammar guides the understanding of sentences. In conclusion, the main points of the theory of the text are the following: a text is autonomous in the sense that it is seperated from the intention of the author; in a dialogue explanation overlaps understanding, whereas the understanding of a text requires the support of explaining textual elements and strategies; the narrative as text is an imitation of action; understanding narrative implies objective analysis and subjective appropriation of the meaning beyond the text, of the actions and of the world recreated by the text.

For Ricoeur, (1986: 168-176), theory of action provides a parallel to the theory of the text for the close relation between understanding and explanation. Causation cannot explain human actions as it can natural events. But since action implies an intervention which changes the course of things, both explanation of the open system of the course of things, which is changed, and understanding of the motives of the intervention, which effect the system, are required for interpretation. It also appears that human action may be considered as a quasi-text: action is exterior to the agent, it becomes part of the course of events as a document, it acquires different meanings in different contexts, and it remains open to judgements other than contemporary. Furthermore, in action as in text, there is a beginning, an intention, and a competence on the part of the agent-author. Narrative provides a paradigm for action; reciprocally, in the case of narrative, the referent of the text is action itself.

Ricoeur (1986: 176-182) identifies two opposite methods in the theory of history: either historians project their understanding of the intentions of the actors upon the events of the past, or they explain the events of the past in analogy with the regularity of natural phenomena. For Ricoeur, history starts when the historians distance themselves from intuitive understanding and attempt to reconstruct the course of events from intentions other than those proferred by the actors. Historical understanding implies the ability to follow a story. Between telling a story and following one, says Ricoeur, there is a reciprocal relation which defines a primitive language game. To follow a story- or history- is to understand not only the order of actions, thoughts, and feelings which go in a certain direction, but also the unforeseen moments, and to adjust as we go along our anticipated conclusions. The end of the story will be coherent with its actions, but not predictable from the start. In the interpretation of history, explanation and understanding will complete each other as in the theories of text and of action, since history is seen as the true narrative of human actions of the past.

According to Ricoeur, only explanation is methodological, but there exists a dialectic of explanation and understanding. It is that dialectic which is adopted in the present research as a basis for the interpretation of adult learning.

Data and Method

Forty-three texts, called learning narratives, constitute the corpus. The learning narrative is a text in which adults tell the story of their learning experience. As a personal account of past events related to one's life, the narrative is similar to autobiographical texts. It is also related to life-history or life-story. It is written in its original form, rather than transcribed from oral accounts.

The data was collected from three different groups at the end of a professional masters program in adult education. The texts are between 29 and 127 lines long averaging 450 words. Some are meant to be denotative and referential (analytical), some use images and metaphors (analogical), and others focus on the self or on events (anaphorical). The analytical is dominant but generally there is a mix.

The method for data analysis was borrowed from semiotics, more precisely from Greimas' structural analysis (Groupe d' Entrevernes, 1979). There are two parts in the analysis, narrative and discursive. In the first part, it is seen how elements of the text are ordered in the initial phase, the performing phase (the action), and the final phase (cognitive and pragmatic sanctions). In the second part, attention is given to temporal aspects of the text, as well as figurative aspects, metaphors, and oppositions.

Results

Analysis of the learning narratives shows in most instances a phase preceding commitment to a learning project, in which the learners objective is unfocused. As a reaction to a destabilizing event, the subject decides to become involved in learning. The situation presented during the phase of decision is very often global and characterized by something missing. There is a malaise in regard to personal resources and the desire to acquire knowledge may be rooted in primary experiences.

The next phase of learning is marked by doubts, difficulties, and a clash between the ideal of the project and its realizability. With the resolution of these problems there is a resurgence of action, and the project is confirmed. Still another moment is characterized by the subject's discoveries and the deepening of knowledge and skills. Action is associated with difficulty, and learning is described as a challenge and personal test. When the project is confirmed again, self-assurance is expressed. In distinction to the initial phase, motivation is focused and stable, but the main character interacts with various elements and acquires different learning objects. During the phase of performance, the text shows a diffuse interpretation of actions, facts, and global learning outcomes.

Almost all texts show a final phase in which a judgement is made on actions which lead to learning, and on what the main character has become; in the seven texts which do not, future action is foreseen which would lead to such a judgement. The results of learning are judged in relation to the desire to grow, to gain knowledge and competence. The principal character recognizes his or her accomplishments and the positive transformation they have brought about. In all but eight texts, the narrator's new state, brought about through learning, is described as more stable and more defined.

From the discursive analysis of the learning narratives, three aspects deserve attention. First, the peculiar use of the present tense throughout the narratives reveals the story of the narrator's learning as part of a discourse on the self. In the first phase of the narrative the use of the historical present instead of the past stresses the analytical dimension of statements. The present tense is also used to comment on the course of events described. Combinations of past and present tenses in the first or third person allow for a shift from facts to judgements, from an effort to recapture the initial state of the main character to a definition of a new state.

The learner is presented in the text as one who has some knowledge or competence, who wants to acquire more and who regards learning as something yet to come. The main character is presented as someone who experiments, discovers, acquires and uses knowledge. In the course of learning, the learner is depicted as in a research process. At the end of the text the main character is one who is able to measure more precisely his or her accomplishments and to recognize the infinite dimensions of learning. The relationship with knowledge or skills is expressed through metaphors. Spacial and visual images locate learning in the discovery of the core of the self.

The transformation which takes place in the narratives can be synthesized with three main oppositions: imprecise/precise (the subject moves from an indefinite project to a clear definition of the self), uncertain/certain (the subject moves from diffuse desire to certainty that change has occured), limited/unlimited (the subject has moved out of the limitations imposed by ignorance or lack of skill and into an open-ended process of self-realization through learning).

Interpretation

Results of the data analysis provide some indications in relation to the research questions. First, the transformation which occurs through the succession of actions related to learning is inseparable from the transformation in the perception of the self. Consequently, the facts and actions reported as being part of the learning process are lined with judgements of relevance or value; the experience of the learner is a synthesis of learning stategies and of recognition of a transformation of the self.

Second, there may be a long decision process before adults commit themselves to a learning process. The desire to be involved in learning seems to be diffuse at first, sometimes rooted in the distant past.

Third, learning experience results in a transformation of the perspective on the self. Through learning one's potential is expanded. Learning means to acquire or consolidate knowledge and competence; it also means for adults to be engaged in an open-ended process of self-realisation

In conclusion, two brief comments may be added. Although a model of the adult learning trajectory can be drawn from analysis of learning narratives, it needs to be confirmed by data from other learning contexts. The results of the research also suggest for adult education practice that adults could reappropriate their learning experience through interpretation of their own stories.

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A Profile of Selected Women Leaders: Toward a New Model of Leadership

Barbara Davis Cheng,Ph.D., Trinity College, Burlington, Vermont

Abstract: Twenty-four women leaders in Vermont state government were interviewed with respect to leadership development and style. Data suggest that women's pathways to leadership are more likely to be non-linear, in contrast to men, and that their leadership styles are contextual and connected, offering evidence of a more "feminine" decision making model.

Introduction

Little is known of women's leadership development and style. Hennig and Jardim (1976) in a study of women corporate leaders offered support that their success might lie within the family dynamics. All were first born, of upwardly mobile professionals, well-educated families, with an especially close relationship with a father who had actively encouraged them to follow non-traditional gender paths. However, with this exception, it is difficult to find research on women in policy making positions, and with good reason, since few women leaders have emerged in this country. For example, in the U.S. Congress only 5% of its members are women. And, despite the fact that over one-half of all women are in the workforce (Rix 1987), a very small percentage sit in board rooms, preside as heads of corporations or presidents of institutions of higher learning. Thus, it is understandable that previous leadership literature has been based primarily on a male model where achievement has been equated with control, command, autonomy, performance (McClelland & Steele,1973; Burns,1978), rather than a process in which leaders encourage and empower others to fulfill both individual and community needs.

Some have attributed this paucity of women leaders to internal factors, others to external influences. For example, Burns (1978) believed sex role stereotyping of women as dependent, passive, non-assertive, and weak, all qualities not conducive to leadership, was a major obstacle. Horner (1972) suggested that women feared success, postulating that achievement placed women in a double bind in which success became equated with a loss of femininity. Although today this research is considered limited, it did open up for legitimate inspection the question of women and achievement.

Other researchers (Kaufman & Richardson,1972; Riger & Galligan, 1980) have speculated that the reason for the lack of female leaders may be external and structural. They assert that women's rise to leadership positions has been hampered by male dominance at top levels and the existence of an "old boys' network" in which younger men are encouraged and mentored by elder superiors. Without a cadre of like women to mentor younger compatriots women's ability to access power and exert influence in various institutions may be diminished.

Yet, even when women exert leadership qualities their behavior is often overlooked, or differentially interpreted (Porter, Geis, & Jennings, 1983). In fact, when women are successful the primary motivation has been attributed to affiliation needs; that they achieve in order to please someone else (Kaufman & Richardson,1982). To add to the dilemna, recent researchers (Belenky, Goldberger & Tarule,1987; Gilligan, 1982; Pearson, 1986) point out that women may differ in their ways of knowing, perceiving and responding, reflecting different socialization patterns which consequently may become transformed into a different style of leadership. Does this suggest that we may need to re-think the traditional models and pathways of leadership?

The opportunity to test this question and to examine leadership in women emerged when in Vermont a woman was elected Governor (Kunin,1984) who subsequently appointed a sizable number of women to positions of influence and power in state government. In fact, almost half of the top administrative positions in Vermont were now being held by women. With the onset of a "critical mass" of women leaders a "golden moment" appeared to study women's leadership with respect to pathways to leadership as well as leadership style.

Method

Subjects: Twenty-four women in top administrative positions in Vermont state government were contacted and asked to be a part of a survey of women's leadership development. All agreed to do so. The interviews, using a qualitative case study method, were conducted during the spring of 1987. The subject pool included the Governor, three Secretaries of super-agencies, and the remainder Commissioners, Deputies, Division heads, or Board members of Governor's Commission on Women. All were in policy making positions, and for the most part headed multi-million dollar operations.

Interview protocol: The interviews consisted of approximately one and one-half hours, in which the subjects were asked to "tell in your own words hou you came to be where you are today; what significant events, people, experiences have helped to shape who you are today; what opportunities/barriers you perceived along the way." Extensive probing was given to elicit information about the early family and socialization experiences, role of education, mentors, career paths, intimate relationships, perception of work, the balancing act, leadership style, implications for women.

Data was then analysed by content anlysis, looking for emerging themes with respect to leadership development and style. The data are rich and engrossing; the present paper is but a small part of the richness of these women's lives. This paper will examine their family dynamics and their leadership style with particular comparison to the Hennig and Jardim sample.

Results

The major findings of this study is that there is no one pathway to leadership; that, in fact, women's career paths are non-linear, contextual, and interwoven with personal concerns. Leadership styles, in turn, reflect this process of relatedness, being more contextual and connected, offering evidence of a more "feminine" decision making process.

Leadership contingency schedules for these women indicate both individual characteristics such as native intelligence, ambition, perseverance, and flexibility, and social forces such as the family setting, which, although diverse, and often filled with struggle, nevertheless provided encouragement and opportunities to try out non-traditional forms of behavior. Later, with societal forces exerting pressures to conform to the stereotypic role, they incorporated both feminine and masculine approved behaviors, still maintaining a firm sense of self and an internal sense of control.

Specifically, the following profile emerged. Average age of the sample was forty-three. Four women were in their 50's (including the Governor), thirteen in their 40's, and seven in their 30's with the most prestigious positions being held by women in their 40's and 50's. Hennig and Jardim's (1976) sample were on the average older. Eleven (46%) were oldest or only, six (25%) middle, and seven (29%) youngest. Thus, 75% of the sample were either oldest, only or youngest children, consistent with previous research on the high achiever (Hennig & Jardim 1976). In terms of socioeconomic status the largest group were from working blue-collar or lower middle class families whose parents had not gone to college. In fact, only 21% of the sample were from the upper or professional class in contrast to previous research (Hennig & Jardim 1976). Diversity was seen in family composition with several women being reared by a single parent or a relative. The traditional nuclear family in which father worked and mother was a homemaker accounted for but 50% of the sample with the other 50% having a non-traditional family, ranging from intact families where both parents worked to being reared by a single parent or by relatives. Thus, this sample represented much greater diversity in family composition than did Hennig and Jardim (1976).

With respect to relationship to parents, the overwhelming majority recollected that in childhood they were closer to their fathers, that they had been encouraged by fathers or male siblings to be non-traditional in activities and interests. However, many mentioned the influence of working mothers or mothers who became displaced homemakers either through death or divorce. From their mothers also emerged a strong theme of moral commitment to people, society, and to the larger world, perhaps the seeds for the generativity and leadership style seen in their present roles.

With respect to education twenty-one of the twenty-four had graduated from college, primarily in a liberal arts field; only two had a business administration degree. Twenty did graduate work with the majority of these having advanced degrees. In fact, when a graduate program was not completed, they explained that they had obtained the necessary skills from graduate work, and then did not worry about the necessary credential in order to do the job at hand. Thus, higher education became an important ingredient for them in their progress toward leadership positions. After undergraduate graduation, the majority then married, had children, put family needs above career needs, then came to their graduate work as adult learners. Two women interrupted undergraduate work, married, had children, then returned to complete a degree and go on to graduate school.

With respect to marriage, the rythms again showed much diversity, with several marrying in early twenties, but others plunging into a career and not marrying until thirty or past. Only four were not married (one was recently divorced). Sixteen had children, and the remaining four were women in their late thirties, wondering how to resolve their need for children and speaking poignantly of this. Biological timeclocks could be heard with the need apparently to marry by thirty, and to have children by forty. Marriages were described as strong, with husbands being supportive and encouraging of spouses' careers. All were two-career marriages, with the majority of husbands being professionals. It appears that, encouraged and mentored by fathers, they sought out equally supporting spouses.

Career aspirations: Many had been interested in mathematics, architecture, medicine, sciences, but had been discouraged from pursuing such careers by teachers and sometimes parents. However, they all spoke of a childhood in which they were encouraged to be independent, take risks, try out new roles, with the result that they felt a sense of mastery and competence. They excelled for the most part in high school, several being student leaders in a variety of settings (editor, cheerleader, manager of a team, president of student council, art scholarship, etc). Thus, the important roles of expectations and perceptions of ability to achieve are seen as important threads. A pattern emerged that of a bright, capable, energetic young girl with supportive encouraging ties to a father who at an early age was beginning to think and act in non-traditional female ways, with a sense of competence and mastery, and yet who upon entering college elected not science but the more traditional feminine studies. In fact, those who did become professionals (lawyers, professors, CPA's, and physician) came to these decisions some time after the traditional four year degree.

In career paths great diversity again was reported. Some, as stated earlier, married early, had children, and then began careers in earnest. Others worked, delayed marriage, then interrupted careers with maternal duties, working part-time until children were of school age. They came to their present position primarily through state government service, non-profit organizations, or politics. Three had been in politics as elected officials, all serving at one time in the Vermont Legislature, not on traditional "feminine" committees, but holding powerful positions in finance, banking, and appropriations. Only one (Governor's legal counsel) had had no previous state government or political experience but had been in the Peace Corps in the '60's. Thus, politics, government service, and non-profit service areas were important vehicles for these women's career paths.

Leadership styles: Women talked of their leadership styles in these terms: Looking at the big picture, asking, how will my program affect other departments, other constituents. Terms such as context, related, consensus, networking, listening to others were frequently used. Some thought that women leaders are criticized for listening to other perspectives, with critics not realizing that this style of leadership is information gathering and sharing. They talked about the lessened need for women to be ego-involved (in contrast to men), of women's ability to listen to other voices, and of by so doing giving others a sense of empowerment and ownership. However, many mentioned that one must also be tough when necessary. They felt that their experiences as wives and mothers had given them good management skills, but also a heightened appreciation of the responsibilies involved in running a state such as Vermont. They were concerned over managed growth, protection of children, women, minorities, resources, the land. They reiterated the need for good management, but with a strong values orientation, one with a vision of what they hoped Vermont could be in the year 2000.

Implications for the education of women

Over half of all college students today are twenty-two years of age or older, with women now outnumbering men. Thus, it is important as educators and administrators to consider gender differences as we train students for leadership. Fortunately, a more balanced view including the feminine perspective is emerging in other disciplines; we must be sensitive to this new scholarship (Biklen & Dwyer,1986).

First, educators need to be sensitive to the needs of young women to try out new avenues, to dare, to risk, to be non-traditional. Opportunities need to be provided for women to polish, improve, remediate in areas such as mathematics and science. In today's technological society women as well as men need these skills. No longer is it acceptable to diminish a female's interest in non-traditional academic pursuits, such as mathematics, medicine, law. As Eccles (1986) points out, "educators must realize that academic course selection, career choice, attributional patterns, expectations for success are all influenced by gender role stereotyping (Eccles, 1986,p.19)." Therefore, successful intervention programs must be developed addressing psychological as well as structural barriers to women and achievement.

Secondly, women must realize that there is no one way to success; that women's paths to leadership can be non-linear, varied, with attention paid to personal as well as professional needs. One can return to unfinished work. There are myriad ways of balancing the professional/personal needs. One perhaps can have it all, but not all at once. Diligence and paying attention to the job at hand is essential, whether it is raising children or managing the state transportation business.

Third, we need to recognize and value "women's work" whether it is balancing the family checkbook, arranging day care, nursing the sick, volunteer work, school work. Women are learning through balancing of personal and professional needs an incredible amount of organizational skills which are easily transferable to another setting. Women also need to recognize that the world of work is exciting, challenging, but no more so than the role of nurturant. It takes energy, intelligence, perseverance, willingness to take risks, to step outside the conventional role without losing sensitivity and responsiveness for people.

Educators need to be aware of and to value women's ways of knowing, recognizing that women make sense of education, work, intimate relations in a contextual patterned, connected way. Furthermore, women, in their leadership roles, need to know that it is acceptable to be instrumental, active, strong, but that is is also acceptable to be sensitive, caring, compassionate, and responsive to the needs of themselves and others. Balancing the need for autonomy with the need for connections is possible and is occurring.

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LEARNING STYLES AND METHOD OF PRE-SERVICE EDUCATION: IMPACT ON SATISFACTION AND PERCEIVED COMPETENCE OF VOLUNTEER EDUCATORS

Chere Campbell Coggins
Assistant Professor
Department of Continuing and Vocational Education
University of Wisconsin-Madison

Abstract

This exploratory study investigated the relationships among volunteer educator's preferred learning styles, method of educational delivery for pre-service education, degree of satisfaction with learning processes and perceived competence to teach the subject matter as a result of pre-service education.

LEARNING STYLES AND METHOD OF PRE-SERVICE EDUCATION: IMPACT ON SATISFACTION AND PERCEIVED COMPETENCE OF VOLUNTEER EDUCATORS

Introduction

The growth of modern technology has enabled educators to vary the educational delivery methods they use to fit specific audiences and circumstances. No longer are educators limited to face-to-face contact - the advent of computer, video, and audio-based technologies has expanded our ability to deliver education to those who due to a variety of circumstances, are unable to meet face-to-face. One audience for whom these advances may be critical is that group of adults who volunteer to teach others, e.g. Scout leaders, 4-H leaders, athletic coaches, and Master volunteers with Cooperative Extension Service who teach subject matter from financial counseling to parent education. Busy with work, family, and leisure these volunteers often have limited time available for the pre-service or in-service education so vital to the effective performance of their volunteer roles.

Therefore, this exploratory study investigated the relationships among volunteer educators' preferred learning styles, method of educational delivery for pre-service education, degree of satisfaction with teaching-learning process, and perceived competence to teach the subject matter as a result of the pre-service education.

Statement of the Problem

As noted by Schlindler-Rainmann and Lippitt (1977),

> ...as Federal human services budgets shrink, and as tax revolts gain momentum, there are implications for the volunteer world. "Smaller can be beautiful," but it is an uncongenial idea when at the same time there are increased expectations to meet more needs of more sophisticated constituents....to respond to this crisis of opportunity, it is clear that volunteer power is needed. (p. 157)

The usefulness of "volunteer power" varies directly with the volunteer's degree of related knowledge and ability to share that knowledge: knowledge and abilities acquired and/or enhanced during pre-service education/training (Ilsley & Niemi, 1981). While participation in volunteer pre-service and in-service education has been studied to a limited extent, barriers to participation in other types of education, i.e. situational, institutional and dispositional (Cross, 1981) appear to be equally applicable to volunteers' participation in in-service education. Given these barriers and the essential element of volunteer education, the focus has turned to the use of alternative educational delivery methods as a means of providing the necessary education.

When designing pre- or in-service education for volunteers, Ilsley and Niemi (1981) stress the importance of focusing on the volunteer to diagnose their learning problems with special attention to physiological, sociological and psychological differences. Recently learner psychological differences have is of a growing body of research which has examined (1) the learning styles of learners, (2) the teacher's abilities, interests and teaching style, and (3) the curriculum content, process and methodological objectives, in part based the premise that the ideal teaching/learning transaction is one in which there is a match between the three elements (Renzulli and Smith, 1978).

If, as Ilsley and Niemi (1981) suggest volunteer education is essential "to assess the abilities of volunteers and to equip them with formal skills needed to perform their assignments (p. 69) and if this educational process is pivotal to volunteer retention and satisfaction (Gibron, 1983; Watts and Edwards , 1983), the challenge is "to create an array of program alternatives attuned to the diversity of personal style and a system of guidance and advisement facilitative of informed decision making about needs and preferences" (Messick, 1976, p. 326).

However, recent research focusing on matching learner's preferred learning style with teacher's instructional style toward the end of enhancing student achievement/competence has resulted in equivocal findings. (Sewell, 1986). Impact on student attitude toward learning has been investigated in a limited number of studies, for example Roberts, 1986; Lee, 1984, again with equivocal findings. Thus the question remains, what is the impact of learning style and method of pre-service education on the volunteer's level of satisfaction with his/her educational experiences and his/her perceived competence as a result of participation in pre- or in-service education?

Methodology

In order to assess the impact of method of pre-service education and learning style on volunteer educator's satisfaction with in-service and perceived competence to teach materials, volunteer educators were surveyed to obtain selected demographic and learning style data. Pre-service education methodologies were randomly assigned to intact groups of volunteer educators. These pre-service educational methodologies included: face-to-face lecture pre-service education; video-based pre-service education delivered at a central site; and audio-based pre-service education delivered to the subject's home. Each of the recipients also received supplementary print-based educational materials which paralleled the education provided. A fourth group of subjects received only print-based materials which were delivered to their homes for independent study.

On completion of their volunteer educator roles, i.e. teaching others the subject matter provided in the pre-service education, each individual completed a "learner satisfaction" survey designed to assess satisfaction with pre-service education and perceived competence to teach others as a result of the training. Those who participated in the volunteer educator's class completed a post-test after the lesson.

Sample

A total sample of 119 subjects was drawn with 99 returning all necessary surveys yielding a response rate of 83%. Ninety-three surveys (78%) were useable. The population sampled consisted of Extension Homemakers (volunteer educators within "study circles") located in three counties in northeastern Wisconsin. All respondents (100%) were female ranging in age from 18 to over 65 years of age with 27% from 46-55, 24% over 65, 21% 26-35; 16% 56-65 and

1% ages 28-35. These volunteer educators had been members of the Extension Homemaker organization an average of 18 years with membership ranging from 1 -54 years. In their roles as volunteer educators within Extension Homemakers they had taught an average of 1.33 lessons per year with individuals teaching 0-4 lessons per year. Sixty-five respondents had taught in other organizations, e.g. church, public schools etc. as well.

Instrumentation

Demographic data assessed grew out a review of literature. These data were collected via a written survey soliciting selected demographic data, reasons for participation in the organization, reasons for participating as a volunteer educator, and past involvement as a volunteer educator in other organizations, etc. The independent variable preferred learning style was measured by the Canfield Learning Style Inventory (CLSI), a 30 item assessment using a 4-point rank order procedure for each item. The instrument generates a total of 21 subscale variables grouped into four major areas: preferred conditions, content, modes and expectancy (performance). Conditions variables include a preference for the following: peer affiliation and instructor affiliation; organization and detailed structure; independence and setting one's own goals; and authority and competition. Content variables include preferences for numerics, language (writing and discussion), objects (working with things versus people) and people (interviewing and counselling). Mode variables are comprised of preferences for listening, reading, iconics (audio-visuals) and direct, hands-on experience. The remaining five variables generate a single expected performance score. Expectancy data were not collected for this study. Method of pre-service education, as described earlier, constituted the other independent variable.

The dependent variables of satisfaction and perceived competence were assessed through a questionnaire containing Likert scale items: items previously indicated as suggestive of these variables by other volunteer educators not involved in the study and previous research. Principle component analysis isolated one single general factor thus all analyses used only one criterion variable.

Data analysis

The data were analyzed using analysis of covariance, with learning style subscales as covariates, to assess the association among and between educational delivery method, selected demographic and participation-related variables and satisfaction with the process of pre-service education which subsumes the concept of perceived competence to teach others as a result of the pre-serivce education provided. Due to the exploratory nature of this study, the .05 level of significance was used. The Bonferroni inequality was used to further explore the nature of significant differences.

Findings

Preliminary analysis of the data indicated a significant main effect of treatment, i.e. method of delivery of pre-service education on the dependent variable of satisfaction with learning styles as covariates (f=.012, df=33). This main effect was noted throughout the analyses, however no significant interaction was noted. Further analysis utilizing the Bonferroni inequality revealed that satisfaction with video differed significantly from satisfaction with print/audio and satisfaction with print/audio differed significantly from that of print alone.

Analysis of main effects of age, years as a member of the organization and reasons for participation in the organization on satisfaction were not significant. However, one main effect emerged in the analysis regarding the extent to which they had been involved in teaching both within and outside the organization and the nature of the organizations in which they had taught and satisfaction with pre-service education. Experience teaching in other organizations significantly effected their satisfaction with the pre-service. Post hoc comparisons revealed that those who had taught in other organizations were significantly more satisfied with their training than those who had not taught in other organizations. There were no interaction effects with method.

The statement "I find it rewarding" in response to the set of questions related to the variables concerning reasons for participating as a volunteer educator in the organization was the one significant main effect revealed with regard to satisfaction for this set of independent variables. Post hoc analysis determined that those who participated for this reason were significantly more satisfied than those who did not select this reason for participation as a volunteer educator. Again no interaction effects with method were revealed. In addition, regression analyses revealed only four learning style subscales to be significant with regard to the criterion variable. These were two 'condition' subscales - peer affiliation and organization and two 'content' subcales - qualitative and inanimate. These subscales were used as covariates throughout the analyses.
In all models tested, the covariates failed to show significance.

Discussion

The purpose of the study was to determine the impact of volunteer pre-service education on satisfaction with the learning experience, recognizing that greater dissatisfaction may increase the probability a volunteer educator will drop out of training and/or discontinue participation in voluntary service. (Darkenwald and Gavin, 1986) Of secondary interest (not reported here) was the impact of method of pre-service education on teaching effectiveness as measured by learner achievement. The findings provide guarded support for the conclusion that methods of pre-service education have a significant impact on satisfaction with that training. Additionally, that past teaching experience and reasons for participation as a volunteer educator impact satisfaction. Learning styles do not appear to have a significant impact. A word of caution however. The sample size limits our ability to analyze and interpret our findings to some extent, thus the guarded support.

One possible explanation for the findings rests on the assumption that pre-service training is seen as a means to an end for volunteers, that end being the successful discharge of their volunteer responsibilities. Analysis of the satisfaction instrument revealed that perceived competence as a result of pre-service education did not represent a separate factor but rather emerged as part of a larger factor which included feelings about effectiveness, efficiency, and general 'happiness index' relative to the training. Therefore although an incongruency may have emerged between preferred learning style and pre-service education method, that incongruency would be diminished in impact if the volunteer felt competent to teach.

Interviews with selected study participants revealed the importance of barriers relative to satisfaction with pre-service education. Respondents commented on time constraints, travel requirements, ability to review lesson multiple times when unsure of one's understanding of a section, child care resraints, etc. The delivery method either minimized or maximized these barriers to participation and appeared to have a direct relationship to satisfaction with the pre-service education. Perhaps those who had taught in other organizations had learned to deal with the array of barriers presented with traditional pre-service education through experience or perhaps were simply more flexible in their reactions to pre-service education as a result of the variety experienced and as a result were significantly more satisfied. Similarly, those who participated as volunteer educators because they found the activity rewarding may have minimized the importance of these barriers relative to the reward gained through participation.

Thus it appears that multiplicity of pre-service educational methods seems indicated, not so much for the purpose of providing a match between teaching style and learning style, but rather to minimize the barriers to participation and learning often presented in pre- and in-service education of volunteers.

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SELF-DIRECTED LEARNING OR AN EMANCIPATORY PRACTICE OF ADULT EDUCATION: RE-THINKING THE ROLE OF THE ADULT EDUCATOR

Michael Collins, Associate Professor, University of Saskatchewan

Abstract: The purpose of this paper is to advance a narrative and critical analysis on self-directed learning presented at the Canadian Association for Studies in Adult Education meetings in June, 1987,[1] and to elicit discussion at the Adult Education Research Conference, 1988, on the contemporary role of the adult educator.

Self-directed learning has become virtually the guiding principle of modern adult education practice in North America, so any critical assessment of its effects would seem to call for lengthy elaboration. However, in making problematic the taken-for-granted discourse, written texts, and pedagogical strategies associated with self-directed learning, there is a risk that a critique locating SDL in an ideology of technique will remain at the level of mere denunciation unless it also points us to genuine prospects for rationally guided alternatives. In identifying such alternatives the critic is more acutely aware of an obligation to reflect upon the ideological orientations from which he himself operates. The mis-match between theoretical perspectives espoused and the pedagogical strategies one actually enacts calls for continuing self-assessment and a willingness to modify personal practice. The practical import of the alternative perspectives signified in this paper is that the adult educator, through her or his acts as adult educator, becomes the central focus of reflection on practice and research. They illuminate ethical grounds from which we can examine what it is adult educators do, and from which we can also begin to posit what should be the nature of vocational commitment.

Theory of action perspectives outlined in this study provide rational support for an emancipatory practice of adult education that has for quite some time been an option to the accommodative intent of mainstream pedagogical approaches exemplified, albeit in somewhat more subtle form, in self-directed learning strategies. During the past two decades, emancipatory practice in adult education has been largely identified with the work of Paulo Freire.[2] Emancipation is at the core of Freire's pedagogy, but the philosophy of consciousness through which he undertakes an intellectual account of his outstanding educational project does not tell us why emancipatory practice should be the paramount theme for adult educators. Theory of action perspectives, especially the ambitious research program of Jurgen Habermas, can reveal to us the reasons why a concern for emancipation should be central to adult education practice. At the same time, the critique of technical rationality that underlies them confirms that pedagogical strategies such as self-directed learning stand in the way of prospects for realizing a rationally derived emancipatory practice of adult education.

The Critique of Self-Directed Learning

In the wake of a commonsense revelation that men and women purposefully engage in learning as part of their everyday lives, with or without mediation from professional educators,[3] the notion of self-directed learning has become enshrined within the modern practice of adult education. As a guiding principle it has spawned an ever expanding body of literature, and a number of impressive pedagogical techniques. The carefully delineated techniques for facilitating self-directed learning[4] have attracted enormous numbers of adherents from among adult educators in North America. These techniques, usually some form of learning contract between professional educator and client, are applied in many adult education settings from basic literacy training through to the professional preparation of medical doctors and graduate students in adult education. Self-directed learning orientations and techniques are now widely regarded as sterling characteristics of a special theory and practice of adult education.

A critical discourse that makes problematic current professionalized practice associated with the reified notion of self-directed learning would emerge from the following concerns:

1. Since men and women have always managed to plan and conduct their own learning without assistance from professional teachers (learning is by definition self-directed), adult educators are remiss when they subvert knowledge of this capacity to serve their own professionalized perspectives and research interests through the deployment of intrusive pedagogical techniques. The introduction of learning contracts and independent learning protocols to organize and investigate self-initiated learning can become an unwarranted, bureaucratic-like, intrusion into communal aspects of peoples' everyday lives.[5] The intrusion of pedagogical technique serves to erode propects for autonomous learning.

2. Techniques associated with self-directed learning, exemplified by the formal learning contract, essentially accommodate prevailing institutional needs to exercise social control. Hence, in invoking the idea of autonomous learning, it becomes a deceptive ruse. Autonomously determined interests are, in effect, accommodated to meet institutionalized and professionalized needs. Attention is readily diverted from the fact that the range of options are really systematically limited since the adult educator mediates a process where prospects for critical analysis of irrational, coercive, institutional requirements are over-ridden by a pre-occupation with technical aspects of the self-directed learning artifact.

   In public schools, the learning contract is a favoured device to normalize recalcitrant and lazy students before more drastic punitive methods are brought to bear. Further, self-directed learning methods have been readily accepted by management in such institutions as the military and prisons where structures of surveillance, normalization, and control are readily apparent. As an accommodative device, self-directed learning blends into such settings where a willingness by individuals to monitor their own behavior adds to the efficient management of the organization.

3. The learning experiences shaped by self-directed learning methods are individualized in a way that ensures learners become wrapped up in their own contracted learning project and the mediated relationship moulded by a "facilitator". At the same time, the

"facilitator" is able, through a technocratic form of mediation with separate individuals, to be detached from any substantial pedagogical involvement in a group setting. (It is the learner's project, after all, so the "facilitator" merely manages the contract and serves as the certificated guide to relevant learning resources). The difficult pedagogical task of creating contexts for genuine communicative, rational, discourse is thus nicely evaded.

4. In reinforcing an individualistic approach, self-directed learning sustains a well entrenched taken-for-granted notion that "you can make it on your own efforts". Thus it militates against the creation of educational contexts that might foster critical dialogue, through people learning together, about social inequalities which contradict this taken-for-granted assumption. Far from empowering adult students, self-directed learning strategies steer them to a negotiated compromise with predominant interests which support social conformity.

Admittedly, the role of "facilitator" of self-directed learning is far more acceptable to adults than that of the didactic schoolman associated in their minds with conventional schooling. However, as a "facilitator" of self-directed learning, the adult educator manages to exclude from her or his pedagogical practice a need to reflect upon the real questions inherent in the original premise from which the concept emerged. What are the structures which impede peoples' capacity to conduct their own learning? Why do adults now need to "learn how to learn"? How come there is a need for professional pedagogues to tell people how to be what they already are?

Theory of Action Perspectives on Emancipatory Practice

The theory of action perspectives briefly described in this section inter-penetrate and, considered together, can provide us with clearer directions as to the nature of ethical and practical commitments envisaged by a genuine emancipatory, non-relativistic, critical philosophy of adult education.

It is from the ambitious research project of Jurgen Habermas, culminating in his two volume Theory of Communicative Action,[6] that we can derive a convincing rationale, not realizable in Freire's phenomenology, for why emancipation should be the central purpose of adult education practice. However, Habermas himself is indebted to the philosophy of consciousness since he has been able to develop from Alfred Schutz's phenomenology a concept of the everyday life-world.[7] The life-world is posited as that dimension of everyday living where the actions of people "making sense together" are of necessity not prejudged by experts and automatically shaped by steering mechanisms of a technical rationality. (In modern adult education practice formal needs assessment instruments, standardized competency-based education formats, and learning contracts exemplify such steering mechanisms). In an ontological sense, the life-world as the arena for all direct experiences of human beings precedes technical innovation. Hence, while the life-world is constantly being shaped and eroded by the deployment of technique and by technocratic innovation, Habermas's outstanding analysis locates within it a prior, superior, communicative rationality which subordinates technical rationality to democratically ascertainable ethical/practical considerations. Habermas describes an *ideal speech situation* to envisage what amounts to a superlative pedagogic encounter where rational grounds for assessing outcomes of critical discourse about possible courses of action become accessible. It assumes a sincere commitment on the part of those involved to the task of achieving inter-subjective understanding.

The complete realization of an ideal speech situation requires *an absence of* coercive or manipulative strategies, denial of speech opportunities, effective concealment of significant information, and decisions governed by instrumental rationality. This state of affairs, of course, can rarely, if ever be achieved. However, it does provide a conceptual framework for the rational assessment of decisions and projectsof action emanating from critical discourse. For adult educators, it illuminates the constituents of a pedagogic situation where genuine participatory democracy is prevalent in shaping our [learning] experiences. Reference to the ideal speech situation does not entail an idealization of the overall educational task if it is purposefully incorporated to enhance the process of reflection on practice in actual adult learning situations where prospects for developing communicative competence can begin to emerge. Of the pedagogies currently evoked by adult educators, Freire's comes closest to the ideal speech situation. Through the dialectical orientations he fosters, communicative competence is advanced as people learn to read and write *together*, work on their relevantly determined projects *together*, and begin to understand (read) and describe (write) *for themselves* the oppressive structures that systematically distort their everyday life-world.

The Theory of Communicative Action, then, can provide us with more self-assured grounds for incorporating the insights and commitments of Freire's pedagogy as integral to contemporary adult education practice. Habermas's outstanding theoretical analyses that lead up to an explication of the ideal speech situation clearly support Freire's radical commitment to *dialogic interaction*, his questioning of the *banking approach* whereby the educational endeavor is typically construed as the transference of bits of information from teacher to learner, and his notion of pedagogical *praxis* in which reflection and action inform each other through a dialectical process.

The rationale for why emancipation should be at the core of contemporary adult education practice calls for efforts to critically assess the existing political economy and prevailing structures of power which clearly influence the nature of educational endeavors. In this regard, the work of Michel Foucault is instructive. His narratives demonstrating the inter-connectedness of power and knowledge help us understand how educational encounters are shaped by their incorporation into an overall system of social control and surveillance.[8] While this dimension of control and surveillance is more starkly apparent in the formal education or particular groups like prison inmates, welfare recipients, and the mentally ill, the adult educator who reflects on her or his own practice will begin to comprehend more vividly how education as a mechanism for social control is taken for granted. Foucault's descriptions illuminate for us the coercive and manipulative structures which interfere with prospects for an emancipatory practice of adult education. From Foucault we are able to learn how the pedagogical artifacts of the professionalized educator - diagnostic tests, formal needs assessment instruments, competency-based instruction formats, and self-directed learning contracts - serve the interests of management concened as much with problems of control and centralization as with educational development.

The theoretical writings of Antonio Gramsci[9] further illuminate the rational grounds for an emancipatory practice of adult education and the kind of pedagogical commitment it would require from practitioners as "organic intellectuals". His critical concept of hegemony refers us to the prevailing state of affairs in which the predominant ideology, largely representing interests of the most powerful groups within society, influences significantly the way most of us experience the world and conduct ourselves in most spheres of everyday life. The predominant ideology, from this perspective, is so pervasive that we internalize in a taken-for-granted manner many of its imperatives on how we should experience the world. Particular significance attaches to the educational sphere where hegemonic interests can be advanced and sustained.

Gramsci's concept of hegemony, however, does not leave us without prospects for social change through the realization of new, more just, hegemonic arrangements. His writings identify education as a context for rational resistance to coercive aspects aspects of prevailing hegemonic interests. In posting also a notion of the "organic intellectual" who identifies unequivocally the social groups in whose interests he or she will be committed, Gramsci has provided thoughtful adult educators with a vocational challenge and a keen sense of the contradictions inherent in the everyday modern practice of adult education. His work poses starkly the kind of questions that can discomfort the reflective adult educator. Whose interests are we most effectively serving? Whose interests should we serve? Whose interests shall we serve?

Any reflections on the role of the adult educator in terms of an emancipatory practice would be enriched by arguments advanced in John Rawls' major work, A Theory of Human Justice.[10] Though seemingly less radical than Gramsci's, his writing marks a significant endeavor to provide the rational basis for a notion of human justice that does not leave the individual subservient to an instrumental rationality serving institutionalized legal and economic interests. At the core of his theory is the principle that no individual should be a means to an end of predominant societal interests.

Rawls is more readable, perhaps deceptively so, than most theorists and his prose is relatively free of the kind of phraseology that may make the writings of Habermas, Foucault, and Gramsci appear too politically laden for many North American adult educators. It is worth noting at this juncture, though, that the analyses of these three theorists and others who write in similar vein, constitute a comprehensive critique of technical rationality, and its attendant mechanisms of control, that prevails in both the corporate, "free enterprise", capitalist economies and the state capitalism of "soviet economies".

The significance of both original writings on theory of action and subsequent interpretations lies in their potential for helping to heighten the quality of critical thinking about adult education not in any tidy pedagogical solutions, such as the self-directed learning contract, we may hope to glean from them. By the same token, thoughtful practitioners will not be inclined to take the theorists on faith as the authoritative source of yet another pedagogical boon-doggle. The contributions of social theories of action to the on-going dialogue about adult education practice is enhanced by subjecting their assumptions and findings to critical assessment. Ultimately, the prospects for realizing an emancipatory practice of adult education depends upon a realistic acceptance of its political and ethical intent and a wiillingness to reflect critically upon what we are and what we do as adult educators.

NOTES

1. Collins, Michael. "Self-Directed Learning and the Misappropriation of Adult Education Practice." Proceedings, CASAE-ACEEA. Hamilton, Canada: McMaster University, May 1987. 68-86.
2. Major texts which trace the theoretical and practical development of Freire's critical pedagogy include: Education for Critical Consciousness (New York: The Seabury Press, 1973), Pedagogy of the Oppressed (The Seabury Press, 1974), Pedagogy in Process: The Letters to Guinea-Bissau (The Seabury Press, 1978), The Politics of Education: Culture, Power, and Liberation (Mass: Bergin & Garvey, 1985), A Pedagogy for Liberation (With Ira Shor Bergin & Garvey, 1987), Literacy: Reading the Word and the World (With Donaldo Macedo, Bergin & Garvey, 1987).
3. Tough, Allen. Learning Without a Teacher: A Study of Tasks and Assistance during Self-Teaching Projects. 3rd Ed. (Toronto: Ontario Institute for Studies in Adult Education, 1981. First print, 1967), p. IV.
4. Prominent how-to texts on the topics include Self-Directed Learning: A Guide for Learners and Teachers (New York: Association Press, 1975) and, most recently, Using Learning Contracts (San Francisco: Jossey-Bass, 1986). Both by Malcolm Knowles.
5. Ivan Illich graphically describes those vital personal and communal aspects of peoples' everyday lives that are continuously eroded by the effects of an ideology of technique in "Silence is a Commons," Coevolution Quarterly, #40, Winter 1983 and "Vernacular Values and Education," Teachers College Record, Vol. 1, #1, Fall, 1979.
6. Habermas, Jurgen. The Theory of Communicative Action, etc. Vols. 1 & 2. Translated by Thomas McCarthy. (Boston: Beacon Press, 1984 & 1987). Re. adult education concerns see M. Collins "Jurgen Habermas's Concept of Communicative Action and its Implications for Adult Learning," AERC Conference Proceedings. (Tempe, Arizona State University, 1985) pp. 102-108.
7. Schutz, Alfred. On Phenomenology and Social Relations (University of Chicago Press, 1975) pp. 79-111.
8. Most relevant texts by Michel Foucault for purposes here: Power/Knowledge, etc. (New York: Pantheon, 1980), Discipline, Punish, etc. (New York: Vintage Books, 1979).
9. See, for example, Adamson, Walter. Hegemony and Revolution: A Study of Antonio Gramsci's Political and Cultural Theory (Berkely: UCLA Press, 1980) and Antonio Gramsci's Prison Notebooks (New York: International Publishers, 1975).
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Teaching and Learning Styles
and the Native American Learner

Gary J. Conti
University of Georgia

Robert A. Fellenz
Montana State University

Abstract

Teaching and learning styles were examined to determine if Native Americans possess distinct learning styles and to explore the relationship of style to student achievement. Inferences were drawn from both the instruments and from follow-up interviews. No distinct Native American learning styles were found; individual differences rather than race determine learning style. Significant teaching style differences were found with students achieving the most in the classes of teachers who were very consistent in their teaching approach.

Introduction

Many factors influence the teaching-learning transaction. Recently, attempts to isolate one of the human factors in this transaction have focused on the concept of style. Ways that learners process information in order to make sense out of their world has been termed learning style. Teacher behaviors that are pervasive across content areas and situations are referred to as teaching style. Instruments have been developed to measure these concepts, and studies have begun to link these measurements of style to various outcomes such as student achievement (Conti, 1985; Welborn & Conti, 1986) and level of moral development (Wiley, 1986). However, the learning style concept has not been explored within the Native American community to investigate if this culturally unique group has definitive learning styles or if instruments are usable with Native Americans which have been developed from the mainstream value set and normed within the dominant culture. While the teaching style concept has been explored in a variety of settings, past studies have been limited by a small sample of teachers which did not include the full range of teaching styles. Montana's tribal college system offered a setting suitable for conducting research to overcome both of these voids. Tribal colleges are tribally controlled community colleges funded under P.L. 95-471 and charged with the dual function of delivering post-secondary education and of maintaining the cultural heritage of the tribe. Therefore, this study was conducted to measure the learning style of adult Native Americans at these community colleges, to measure the teaching style of the faculty at the seven tribally controlled community colleges on Montana's reservations, and to analyze the relationship of learning style and teaching style to student academic achievement.

Methodology

Support for conducting a comprehensive teaching style/learning style research project was obtained by personally visiting administrators, faculty, student organizations, and boards at the seven tribal colleges in Montana. Research assistants were identified on each campus. A learning style instrument was administered to all students willing to participate in the study. Similarly, a teaching style instrument was given to the faculty. At the end of the quarter, course grades and overall grade point average were collected for each student who completed a course. In order to check on the validity of the learning styles concepts measured and to gather further information about influential teacher behaviors, students with unique learning style profiles were identified, and over 70 in-depth interviews were conducted.

Learning style data were collected on 693 students; teaching style data was gathered on 80 teachers. Learning style scores and course grades were available for 2,079 cases; teaching style score and course grades were available for 1,447 cases. The independent variables of style were measured by the Canfield Learning Style Inventory (CLSI) and the Principles of Adult Learning Scale (PALS). The dependent variable was the student's achievement as measured by final course grade. This grade was adjusted for individual difference in ability to succeed in college by comparing it to the student's overall grade point average, which is an indicator of the student's general and past performance in the college setting. Analysis of covariance was used.

The CLSI (Canfield, 1983) is a 30-item instrument which conceptualizes learning style as composed of the elements of preferred conditions, content, and mode of learning and of the expected level of success. The preferred conditions of learning consist of the eight factors of Peer, Organization, Goal Setting, Competition, Instructor, Detail, Independence, and Authority. Preferred content contains the scales of Numeric, Qualitative, Inanimate, and People. Preferred mode has the scales of Listening, Reading, Iconic, and Direct Experience. Expectancy has four levels which range from expecting to do poorly to confidence in performing in a superior manner in the learning activity. The learning style scores were categorized in the following percentile ranges: Low = 1-10; Moderately Low = 11-39; Moderate = 40-69; Moderately High = 70-89; and High = 90-99.

PALS (Conti, 1982) is a 44-item summative scale based on principles in the adult education literature. It gives an indication of an instructor's overall preference for teaching behavior in an adult education setting. High scores on PALS reflect a learner-centered approach to the teaching-learning transaction. Low scores on PALS denote a preference for the teacher-centered approach in which authority resides with the instructor. It contains the seven factors of Learner-Centered Activities, Personalizing Instruction, Relating to Experience, Assessing Student Needs, Climate Building, Participation in the Learning Process, and Flexibility for Personal Development (Conti, 1985, pp. 9-10). Teaching style scores were categorized as follows: Moderate = between the mean and .5 standard deviation; Intermediate = between .5 and 1 standard deviation from the mean; High = between 1 and 1.5 standard deviations from the mean; Very High = between 1.5 and 2 standard deviations from the mean; and Extremely High = at least 2 standard deviations from the mean. The mean for PALS is 146 with a standard deviation of 20.

Learning Style Findings

Of the 693 students tested for learning style, 566 identified themselves as Native Americans. The average age for this group was 29.6; 60.6% were females, and 39.4% were males.

In order to uncover any distinct learning styles for this group of Native Americans, their scores were compared to the norms which were developed with students from the community college system in Kansas City. The scoring of the CLSI converts raw scores to a percentile score. Since "the distribution of percentile ranks is uniform throughout the transformed score scale" (Roscoe, 1974, p. 37), the amount of diversion from the 50th percentile indicates the strength of the group's preference for a specific element of learning style. Because the ranking method of the CLSI causes a forced choice, a high preference for one learning style element will automatically cause a lower rankings of the other elements in the set.

One area of the CLSI measures the conditions under which a person prefers to learn. This is the only part of the CLSI that contains two sets of learning style elements. One set consists of Peer, Organization, Goal Setting, and Competition. Peer measures a preference for working in student teams and for having good relations with other students. Organization measures a preference for having the course logically and clearly organized with a meaningful sequence of assignments and activities. Goal Setting measures a preference for setting one's own goals, making one's own decisions on objectives, and using feedback to modify goals and procedures. Competition measures a preference for desiring comparison with others and for knowing how one is doing in relationship to others. The Native American scores in these areas were Peer--41.9, Organization--49.0, Goal Setting--52.9, and Competition--60.8. The greatest preferences in this set of scores was only 10.8 above the median for the norm group. The scores for Organization and Goal Setting were near the 50th percentile. Although Peer was the lowest, it too was not a great distance from the 50th percentile.

The second set of scores in the preferred conditions of learning consists of Instructor, Detail, Independence, and Authority. Instructor measures a preference for knowing the instructor personally and for having a mutual understanding with the instructor. Detail measures a preference for specific information on assignments, requirements, and rules. Independence measures a preference for working alone and independently, for determining one's own study plan, and for doing things for oneself. Authority measures a preference for desiring classroom disciplines and maintenance of order and for having knowledgeable instructors. The Native American scores in these areas were Instructor--43.2, Detail--55.8, Independence--49.3, and Authority--59.1. As with the first set of scores, the Native Americans did not show any strong preference for learning conditions in these four areas. Although Authority was the highest, it was only slightly above the median of the 50th percentile. The other scores tended to be near the median.

The CLSI also measures the content about which a person prefers to learn. The four subscales in this area are Numeric, Qualitative, Inanimate, and People. Numeric measures working with numbers and logic such as in computing or solving mathematical problems. Qualitative measures working with words or language such as writing, editing, or talking. Inanimate measures working with things such as building, repairing, designing, or operating. People measures working with people such as in interviewing, counseling, selling, or helping. The Native American student's preference for content were Numeric--58.0, Qualitative--56.3, Inanimate--50.5, and People--38.8. Two of these scores are only slightly above the 50th percentile, and one is at the median. While the Native American students did not have a strong preference for content about which to learn, they were fairly consistent in ranking the People questions as either a low or their lowest preference. Because of this low ranking, the content and structure of these questions were explored during follow-up interviews with Native American students, tribal college personnel, and members of the research team.

The third area measured by the CLSI is the mode by which a person prefers to learn. The four subscales in this area are Listening, Reading, Iconic, and Direct Experience. Listening measures passive listening such as hearing information by lectures, tapes, or speeches. Reading measures examining the written word by reading such things as texts or pamphlets. Iconic measures viewing illustrations by movies, slides, or pictures. Direct Experience measures handling or performing such as in a shop or laboratory, on a field trip, or in practice exercises. The Native American preferences for these modes were Listen--59.8, Read-- 65.3, Iconic--47.0, and Direct Experience--39.1. The dispersion of scores in this area were the greatest for the CLSI in this study. Reading was the highest score on the entire instrument. While the scores for Listen and Iconic were only slightly different from the median, the high score for a reading preference and a disdain for learning from direct experience were antithetical to much of the literature about Native Americans and to the experiences of many tribal college faculty. Therefore, the nature of these concepts and questions were also explored with follow-up interviews of Native American students.

The fourth area measured by the CLSI is the person's expectancy level or the predicted level of performance in the learning activity. The four levels of expectancy are Superior, Good, Satisfactory, and Unsatisfactory. The Native American students' scores in these areas were Superior--56.4, Good--39.9, Satisfactory--49.6, and Unsatisfactory--52.1. As in the other areas of the CLSI in this study, no strong expectancy levels for the group were revealed by the scores. In examining individual profiles of preferences in this area, several students who scored extremely high in expecting to do superior work also scored very high in the failure category. This apparent contraction was examined in the follow-up interviews.

In addition to comparing group learning style scores to the norms to determine if distinct learning styles existed for Native Americans, differences between the students at the various reservations were also explored. Analysis of variance indicated that differences existed in the learning style areas of Peer (F = 2.49, df = 6/555, p = .02), Goal Setting (F = 3.01, df = 6/555, p = .007), Instructor (F = 2.36, df = 6/557, p = .03), Independence (F = 2.32, df = 6/557, p = .03), Authority (F = 2.45, df = 6/557, p = .02), Numeric (F = 4.66, df = 6/557, p = .001), and People (F = 2.58, df = 6/557, p = .02). Thus, on one-third of the scales, differences existed even within the Native American community concerning their preferences for learning. An examination of the means on these seven scales indicated a tendency for the reservations to form three groups. One group represented the reservations with a reputation for the strong support of traditional native values and culture; another consisted of the group which has a reputation for integrating many values from the mainstream culture into their society; the third group contained the other reservations. These scores indicate that in addition to no dominant learning styles scores existing when Native American scores are compared to the norm, Native Americans do not represent a monolithic group in terms of learning style. While cultural elements on each reservation may influence scores, individual differences exist throughout the Native American community.

The relationship between the learning style of tribal college students and academic achievement was also examined. Scores on each of the 20 subscales of the CLSI were used as the dependent variable in one-way analysis of covariance. Course grade was the independent variable with overall grade point average as the covariant; the correlation between grades for the grading period of the study and the students' overall grade point averages was .57. Significant differences were found on only two of the subscales: Instructor (F = 4.31, df = 4/1931, p = .002), and Read (F = 2.95, df = 5/1924, p = .02). Students who had a moderately high preference for knowing the instructor personally and having a mutual understanding with the instructor achieved significantly higher goals than the other groups. However, students who had a moderately high preference for learning by examining the written word by reading such things as texts or pamphlets received lower grades than any other group; the highest grades were achieved by students who had either a moderately low or low preference on this scale.

Teaching Style Findings

Teaching style scores were collected on 80 teachers in the tribal colleges who taught in all aspects of the curriculum. The average age of the group was 40.8; 61% were males, and 39% were females. The group was fairly evenly divided between full-time (54.4%) and part-time (45.6%) faculty. Approximately half of the group had at least a masters degree. The group averaged nearly 10 years of experience teaching at the college level with slightly over 3 years experience at the tribal college.

The group's mean score on PALS was 138.1. While this score is .4 standard deviations below the mean for the instrument, it is not abnormal for a post-secondary setting. Unlike scores from previous studies using PALS, the scores for this group ranged from 99 to 178; thus, scores ranged from nearly 2.5 standard deviations below the mean to over 1.5 standard deviations above the mean for the general instrument. For some of the subscales, the scores ranged from below two to over two deviations from the mean.

When teaching styles scores were duplicated for each student completing a class, 1,447 cases were available. The average age of the student for this entire data set was 29.4; 59.1% were males and 40.9% were females. The average teaching styles that the students encountered was 140.87; this overall style was only .26 standard deviations below the mean on PALS. The students' average grade in the 1,447 cases was 2.926; their overall grade point average was 2.928.

The relationship of teaching style to student achievement was analyzed by means of analysis of covariance with teaching style as the independent variable, student course grade as the dependent variable, and overall grade point average as the covariant. Separate one-way analysis of covariance were calculated for the total PALS score and each of the instrument's seven factor scores. Although the total PALS score was not significant (F = 1.34, df = 8/1419, p = .22), significant differences were found on six of the seven factors. A posteriori contracts with the Duncan Procedure were used to explore these differences.

Factor 1 is Learner-Centered Activities (F = 4.40, df = 9/1359, p = .001). Items in this factor relate to evaluation by formal tests and a comparison of students to outside standards. Students achieved the highest grades when they were in the classes of the teachers who were Extremely High in the style they profess. Thus, the extremes at both ends of the style range were beneficial to students. All other groups were near the mean for student achievement except for the group that had a Very High commitment to the teacher-centered approach. Here students grades were .45 points below the average and were nearly a full grade (.91) below the highest group.

Factor 2 is Personalizing Instruction (F = 2.64, df = 6/1388, p =.02). This factor relates to things that teachers do to personalize learning to meet the unique needs of each students and is a general measure of the student's input concerning the overall curriculum. Because the curriculum is somewhat controlled by the credit requirements of higher education, it is not surprising that scores for this factor were skewed toward the teacher-centered approach and that the highest scores were less than one deviation above the mean. The differences resulted from the two Intermediate groups. The achievement level for both the Intermediate teacher-centered approach and the Intermediate learner-centered group were nearly equal and were significantly higher than that of other groups.

Factor 3 is Relating to Experience (F = 4.97, df =8/1374, p = .001). It relates to the degree that teachers take into account their student's prior experiences, encourage students to relate new learning to life experiences, and organize learning episodes according to problems that students encounter in everyday living. While most of the style levels were near the mean, three were not. Grades were lowest for students experiencing the Extremely High teacher- centered approach and the High learner-centered approach. Those experiencing the High teacher-centered approach achieved the highest grades.

Factor 4 is Assessing Student Needs (F = 6.94, df = 7/1420, p =.001). It refers to the teacher finding out what the student wants and needs to know and assisting students in developing goals. Differences existed between those who practiced a High learner-centered approach and those professing a Very High teacher-centered approach. Grades were the highest for students in the High learner-centered classes and lowest for those in the Very High teacher-centered classes.

Factor 6 is Participation in the Learning Process (F = 5.31, df = 8/1419, p = .001). This factor addresses the amount of involvement of the student in determining the nature and evaluation of the content material. The differences were due to the Very High and Moderate teacher-centered and the High and Very High learner-centered groups scoring higher than the other groups. The lowest grades were in the Extremely High teacher-centered classes.

Factor 7 is Flexibility for Personal Development ($\underline{F}$ = 5.31, $\underline{df}$ = 9/1400, $\underline{p}$ = .001). This factor deals with the degree of flexibility in the classroom environment and curricular content for meeting the changing needs of the students and the addressing of values to stimulate personal growth. Significantly high grades were associated with the Very High teacher-centered approach and the High and Very High learner-centered approach.

Of the seven factors in PALS, only Climate Building ($\underline{F}$ = 1.92, $\underline{df}$ = 7/1385, $\underline{p}$ = .06) was not significant at the traditional level; however, it was nearly significant. This factor deals with creating a comfortable physical and psychological climate for learning. While most scores were near the mean for this category, the lowest grades were in the classes of teachers with an Extremely High teacher-centered approach, and the highest grades were with those practicing an Intermediate and High learner-centered approach.

Discussion

Definitive findings were uncovered in both the areas of learning style and teaching style. The research design contributed tremendously to obtaining a clear understanding of these findings. While most designs for rationalistic studies make inferences from the instruments used in the study, this study augmented this process by cross-checking the results with the population of the study to gather further insights into the concepts and wording in the instrument and into the statistical results.

No distinct learning style exists for Native Americans. As a group Native Americans do not differ greatly from the norms for the CLSI. Within the various tribes, great diversity for learning styles preferences exist. Thus, instructors of Native Americans must look at the uniqueness of each individual. Just as with other groups in society, stereotypes do not apply when addressing Native American learners. Since the instructor can expect the full range of learning styles to exist among the Native American learners, there is no substitute for assessing the individual learning style of each Native American learner.

However, this individually does not mean that culture can be ignored. Culture is "the complex of shared concepts and patterns of learned behavior that are handed down from one generation to the next through the means of language and imitation" (Barnouw, 1987, p. 4). It consists not only of the pattern of life within a community but also of "the organized system of knowledge and belief whereby a people structure their experience and perception, formulate acts, and choose between alternatives" (Keesing & Keesing, 1971, p. 20). Thus, culture is an internal set of operating standards that determines how people operate, how they communicate, how they express themselves, and in essence how they make meaning of other people's actions (J. Pease-Windy Boy, personal communication, January 15, 1988). It is the pervasive force within which learning styles operate. The grouping of some learning style elements among some of the reservations that have some cultural similarities implies that cultural factors may influence some individuals to develop certain learning style preferences. However, even within these groups strong individual variance exists. Therefore, instructors should view the culture as a source for clues for ways to help individuals learn more efficiently rather than as a map of predictable behavior for large groups of people.

Although no distinct Native American learning styles were found, several scores were contrary to existing beliefs or experiences. Interviews with Native American students and tribal college personnel indicated that either the wording of the questions was poor and culturally biased or that the concept was very narrowly defined. For example, the items on the People scale are middle-class oriented and insulting to poor, rural people; this is especially so for those who have been on welfare. The Direct Experience items favor activities such as those in a science laboratory rather than real life situations. The Reading items refer to directed textbook reading rather than being a measure of general independent reading. Expectancy scores were influenced by age; older students expected to do well if upon entering the class they discovered that there was not a great gap between their previous knowledge and that needed to start the course. However, if a large gap existed, they expected to fail. Native American conceptualize the cooperative act of learning far differently from that of the Competition scale, yet this scale seemed to measure some of the athletic type competition that exists in their society. These examples indicate some of the language difficulties that exist in the CLSI and the benefits or clarifying concepts with the tested population rather than just inferring them from an established instrument.

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Teaching style does make a difference in student performance. The composite graph for the seven factors of PALS indicates a general pattern of an "M". With the exception of Factor 1, the Extremely High practice of either the teacher-centered or the learner-centered approach led to lower levels of student achievement. This was true of the Extremely High teacher-centered approach for four of the five other factors and of the Extremely High learner-centered approach for the only other factor to have a score in this range. However, Very High practice of either approach tended to be associated with high grades on several factors as indicated by the upper peaks of the "M". Except for Assessing Student Needs and Learner-Centered Activities in the teacher-centered approach, grades were above the mean in all factors for the Very High categories. Two factors did not have teachers scoring in the Very High range. In each case, the category with the highest learner-centered ranking contained high grades. The High learner-centered categories were generally associated with high grades while the High teacher-centered categories had grades near the mean. Grades of students who had teachers in the Intermediate and Moderate categories were near the mean for most factors. Thus, while the learner-centered approach is generally effective, consistency is a key teaching-style element in fostering improved student achievement. Teachers who score Very High in either approach are consistently implementing complementary elements of a comprehensive educational philosophy. Because of their consistency, students can predict their actions and seem to flourish. Since consistency in either approach is generally productive, the educational debate can shift from an argument of which style is best to an examination of the internal consistency of each teachers actions. Staff development can focus on personal assessments and introspection. Administrators should be challenged to establish support systems which will allow strongly committed teacher to practice a consistent educational approach in all aspects of the instructional approach.

Collectively, the findings from this study imply that adult learning in a formal setting is a human activity influenced by professionals. Learning styles are unique to the individual; therefore, teachers need to deal with each student on an individual, personal basis. This involves finding out about their learning preferences and their background. In the overall educational process, teachers are true professionals. "True professionals know not only what they are to do, but are also aware of the principles and the reasons for so acting" (Elias & Merriam, 1980, p. 9). Such actions are then consistent and easily understandable by students and colleagues.

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Using a Data Management System to Control Research Data Entry and Manipulation

Gary J. Conti
University of Georgia

Robert A. Fellenz
Montana State University

Abstract

Computer technology now makes it possible for researchers to gain complete control over their data. Examples for using a popular data management system to enter and manipulate data in various types of research are provided.

Introduction

A critical part of research is the data entry. Because it is time consuming and tedious, many researcher defer from data entry and either relegate it to a subordinate or pay to have it done. Unfortunately, this deprives the researcher of actual contact with the raw data and the insights which this might offer. Also, once the data is entered, all flexibility is lost for adding new variables, manipulating the data, or customizing the data for new needs. While statistical packages such as SPSS-x and SAS allow some variable manipulation, they are cumbersome and do not allow for the manipulation of the actual data. However, microcomputers and their supporting software now make it possible for the researcher to have complete control over the data.

Most researchers have access to a mainframe computer and a microcomputer. When these are hooked together with a modem, it is possible to conveniently move data between the two and to use the strength of each in preparing and analyzing research data. While some researcher have been doing this for the past few years and combining this with a word processing package, few are using the power of a data management system to actually enter the data and then arrange it for uploading to a mainframe or analysis with a statistical package on a micro.

Data management software now make it possible for researchers to control research data at all stages of the project. In the past, researchers usually had to wait until all data had been collected and arranged in its final format before data entry could begin. In the meantime the various parts of the data were often stored in various files, boxes, or piles. Modern data management system allow a different approach to handling research data. With them, data can be entered as it comes in by either the researcher, research assistants, or clerical staff. It can be entered at all stages of the research project. When all the data has been collected and entered, the researcher can output a file in any form desired for use in analysis. Meanwhile the original file remains in tack and can be used for other purposes. If a modified file is needed for analysis purposes, a new one with the needed changes can be generated quickly.

A data management program is computer software that allows the user to create records in any needed form so that data can be entered into the computer in a convenient and meaningful format and then re-arranged in a variety of formats. Each record in the program serves as an individual file folder for each case in the study. At the time of data analysis, the researcher can select the exact pieces of data desired from each folder and then electronically output a file to meet these needs.

Data management programs were originally designed for the business world as a convenient way to store data and as a quick way to retrieve it. Because these programs allow the user to define the fields to be used within each record, allow for constant modification in the structure of the program, contain a variety of sorting and replacement features, and permit the custom outputting of selected data, they are ideal for use in educational research. These programs can be used to efficiently control data in both rationalistic and naturalistic inquiry. dBase III Plus is one of the most popular data management systems in use. Techniques were developed at the Kellogg Center for Adult Learning Research at Montana State University for using an earlier version of this program with a variety of research projects. The following examples draw upon these experiences using the dBase II system.

Rationalistic Studies

In rationalistic studies, data tends to be in a quantitative form. It usually consists of demographic data plus information from a measurement device such as standardized instruments or questionnaires. While long strings of numbers from sources such as these are difficult to enter without errors when using a word processing system, dumb-terminal hooked to a mainframe, or an antiquated keypunch machine, dBase is ideally suited for handling this information.

First, a dBase file must be created. To do this the researcher needs to merely issue the "create" command and name the file. The computer then prompts the researcher to provide names for the fields of information and to define their size. Some variables such as name, age, gender, and identified number deserve to have a separate field in the file because they may be independently retrieved at a later time. However, since dBase II is limited to slightly over 30 fields, which may be up to 254 characters long, it is not possible or efficient to define a separate filed for each item of an instrument. The goals of using a data management system is to have a means to enter the data quickly and efficiently, to be able to easily manipulate it, and to be able to output it quickly in the exact form that will be needed for use in a statistical program. Speed and accuracy may require that the variables be grouped in a logical way to facilitate data entry. Thus, a file for a two-page questionnaire with 20 items on the first page and 18-items on the second page might contain the fields of ID, Name, Age, Gender, Grouping, Item1-10, Item11-20, Item21-30, Item31-38. By specifying fields that are exactly the required length for the numeric input, the researcher can have several checkpoints to assure that the data is being entered in the correct position. dBase also provides for a beep at the end of each field; this functions as an audio pacer during data input. If the fields are kept relatively small, errors can be located and corrected easily. For example, if the researcher failed to hear a beep when entering Item 10 of the questionnaire, it would only be necessary to backtrack one-half page to locate the error.

This method of designing an appropriate structure for convenient data input was used by both the faculty and staff at the Kellogg Center for Adult Learning Research. Two members of the clerical staff assisted other college researchers in entering data from a 14-page questionnaire. The questionnaires were printed on both the front and back of the sheet, and the responses were marked directly on them. After less than one hour's training, one secretary designed the structure. Each field consisted of approximately one-half of a page. The total structure had 28 fields with a reinforcing beep near the middle and bottom of each page. The pile of questionnaires were divided between the two, and rapid data entry began. However, one secretary soon discovered that much time was being wasted by turning the pages. Therefore, she modified her structure so that the fields were arranged for all the odd pages first and then for the even pages in descending order. With her new structure, she went directly through the questionnaire, flipped it over, and ran through it again in a similar manner. This eliminated the constant turning of the questionnaires and allowed her to keep her hand on the key pad at all times. It was not only physically faster but also psychologically less frustrating. No data was lost as a result of the modification of the structure. Since the field names remained the same, the two separate files were easily merged once all the data had been entered.

For one of the center's projects, data was entered over a long period of time and by teams. Nearly 700 learning style instruments and 80 teaching style instruments were collected at the beginning of a study. Grades for these students were not available until the end of the grading quarter. At that point, student information, teacher data, and grades had to be matched up. Because of the data management system, it was possible to immediately begin the data entry process. Since the instruments were received in separate packages from each of the seven sites in the study, separate dBase files were established for each site for each of the variables of learning style and teaching style; this was done because smaller files are less burdensome for the computer to sort through and files with identical variable names can always be joined.

The learning style instrument contained 120 responses for its 20 variables. The answer sheet also contained demographic information. The dBase structure was set up so that those entering the data could flow across the page in a natural left-to-right reading pattern. Each demographic variable was assigned a separate field as it appeared at the top of the page. Code numbers were assigned to variables as they appeared on the page; for example, since Male was the first choice under Gender, it was assigned a 1. The 120 entries were in 30 items with 4 responses for each. The items were numbered across the page. There were six items in each of the five rows. The data fields were divided into half-page intervals. Each field contained 12 responses for the 3 items in the half row. Thus, the structure which appeared on the screen contained the fields of ID, Name, Gender, Age, Race, Tribe, LS1-3, LS4-6, LS7-9, LS10-12...LS28-30. When entering data, the recorder received a reinforcing beep at the middle and edge of each row. Consequently, each case could be entered in less than a minute. A similar structure was designed and used for the teaching style information.

Because so much data was collected, a team approach was used for data entry. The structure for the file was copied to a disk and given a different name. All team members had their own disks and computers. After all the data had been entered by the various team members, it was merged together into one master file. This was accomplished by using the "append" command and required less than five minutes.

Although a data management system can greatly facilitate data entry, its greatest strength lies in the researcher's ability to manipulate the data once it is in the program. After entry, the data can be sorted, retrieved, combined, and changed. Different data sets can be constructed to meet the immediate needs of the researcher or project. The system is versatile because most statistical packages, mainframe computers and word processing programs can read ASCII files, and dBase has the ability to produce this type of file.

dBase can create ASCII files in two ways. The "copy" command outputs ASCII files for the fields and with the fields in the order requested by the researcher. The researcher can further control the output by limiting it to certain cases such as only the women from the gender field. When the copy command is combined with the standard data format option, the program outputs the data in blocks just as it is recorded so that missing data does not misalign the data. While the "copy" command is very powerful, it has one severe limitation. It can only output the data for each case in one long line. Statistical programs have traditionally limited data cards to 80 columns. While this is an artifact of the keypunching era, it is also convenient to keep the lines of data to a length that can easily be read on the screen.

dBase‘s second method of creating ASCII files overcomes the limitation of the copy command. A series of commands can be linked together in a "procedure file" and executed automatically. The following is an example of a procedures file for creating an ASCII file which has two cards per case and which could be used with a SAS or SPSS-x program.

```
set talk off
use {dBase file}
set alternate to {new ASCII file}
set alternate on
do while .not.eof
? $(ID,1,3) + $(GENDER,1,1) + $(AGE,1,2) + $(EDUC,1,1)
? $(Q1-15,1,15)) + $(Q16-30,1,15) + $(Q31-45,1,15) + $(Q46-60,1,15)
skip
enddo
```

This program (a) eliminates the display of commands on the screen, (b) gets the needed dBase file, (c) creates an alternate file on the disk to which output can be sent, (d) initiates the command to echo screen output to the newly created file, (e) instructs the computer to first print the 54 characters on Card1 starting with the first character and then to print the 58 characters on Card2, (f) to skip to the next case in the file, and (g) to continue this process until the end of the file is reached.

The procedure files are the most important element for allowing the use of data management files in rationalistic studies. With these files, an unlimited number of variables can be combined on as many cards as necessary in the format that is required by statistical packages. However, the typing of the variables on the print lines of the procedure file can be burdensome, and errors can easily be made. To avoid this, the variables can first be arranged in the desired order in temporary dBase files by using features of the copy command and the "modify structure" command. In this two step process, the "copy structure" command is used to duplicate the file structure in a temporary file. After "using" the temporary file, its structure is modified to contain only the variables that will be printed out into the ASCII file, and the variables are arranged in the order that they are to be printed. After the temporary file has been modified, the needed data is "appended" from the master file. After "displaying the structure" on the screen and recording the exact order and length of the fields (either by hand or on the printer with the print screen option), a second temporary file can be created. This file will have fields with short field named such as Card1 or Card2 but with field lengths that correspond exactly to the lengths of the variables that will be on each card in the final output file. For use with the above listed procedure file, it could have a field names Card1 that contains 7 spaces and a Card2 with 60 spaces. After the second temporary file has been created, data can be copied into it from the first temporary file with the standard data format option. This option transfers the data in blocks instead of by field names. In this way, the second temporary file is a duplicate of the multi-card ASCII file that will be created. The procedure file can now contain simple lines such as (a) ? $(CARD1,1,7) and (b) ? $(CARD2,1,60).

These procedures were used to produce the final data files for the learning style/teaching style study. However, several other things were done during the study because of the flexibility offered by dBase. Raw data files were created for scoring each of the instruments with SPSS. These scores were written to an ASCII file by SPSS and coupled with an ID number. A word processor was used to edit the ASCII file from SPSS. After the main files were modified to include fields for the scores, the SPSS produced scores were appended into the dBase files. After grades were obtained, the learning style, teaching style, and grade files were "joined" into one large file. Joining was possible because each file contained ID numbers. Temporary files were created to re-arrange the variables for final output. Lists of the learning style profiles of the students at each of the seven sites were printed so that students with unique profiles could be identified for interviews. Finally, when one site wanted a list of its students' scores for individual counseling purposes, it was printed upon request.

Experiences at the Kellogg Center illustrated that the data management systems which were originally designed for the offices of the business world can be a powerful research tool in rationalistic inquiry. By using a system such as dBase, the researcher can thoroughly control the data at every stage of the research project.

Naturalistic Inquiry

Naturalistic studies tend to produce volumes of qualitative data. Information from interviews and field notes can accumulate and quickly overwhelm the researcher. Naturalistic researcher often compound their problems of data management at this stage of the research by expanding their data by such things as transcribing tapes of interviews. What is needed is a way of beginning the reductive process of organizing the data into meaningful categories.

Naturalistic inquiry attempts to preserve individual pieces of information. Knowledge is viewed as multidimensional with the task of the researcher to organize data into categories that provide an understanding of the diversity in real life situations. A data management system provides a mechanism for holding and sorting the multitude of these bits of information for manipulation by the researcher.

Use of a data management system with naturalistic data involves the entering of individual pieces of information in it original form along with tags which identify the data and allow for its sorting. A structure is created which contains a large field for the piece of data gathered from the natural setting, smaller fields for identifiers that preserve the source of the information and for keywords that can be used for classifying the data, and an optional comments field in which the researcher can record insights about the data. Since the fields in dBase are limited to 254 characters or about 40-50 words, the use of dBase forces the researcher to break the data into meaningful and manageable pieces at the data entry stage.

This process was used to enter data from interviews gathered in the evaluation of a state's adult basic education program. The structure was simple. It contained a 254-character field for direct quotes from the interviewees, an 8-character field for a keyword that represented the researcher's classification of the quote, and several small fields for code numbers related to the source of the interview. Several quotes were entered for each interview. To eliminate unnecessary typing, the "carry on" function was initiated so that all information from the previous record was carried forward to the new record. With this feature, only the quotes and keywords had to be typed for each new bit of information from the interview.

One of the most powerful features of a data management system in naturalistic inquiry is that it allows for the rapid sorting of data. By selecting a keyword, a combination of keywords, or various demographic characteristics, the researcher can have the computer retrieve at electronic speed a desired and related data set. This information may be either copied to the screen or sent to a printer. Since viewing materials on the screen and analyzing the same material on a paper copy seem to be different processes, many researchers may prefer the hard copy. Whichever method is used, researchers can output as many combinations of data sets as are necessary for making sense of the data and for drawing conclusions.

The results of naturalistic studies are usually reported in rich, descriptive narratives. Direct, insightful information and quotes are often included. Quotes that will be used in the final report can be copied from the data management system into an ASCII file. The ASCII file can then be imported into a word processing program for final editing and inclusion into the report. This eliminates retyping and encourages the use of very descriptive data in reports.

Conclusion

Computer technology now makes it possible for researchers to gain complete control over their data and to be able to manipulate it at all stages of their research project. The concepts behind such manipulation are simple. With the assistance of the program manual for the software and with a relevant situation in which to apply the principles associated with data management, the procedures are easy to learn. The experiences at the Kellogg Center suggest that special software programs are not required for using data management procedures in research; the general data management programs which were originally designed for the business community can be structured to meet the unique demands of each research project. Equipped with such a program, the researcher can concentrate on the higher level thinking skills required by the project rather than being preoccupied and limited by the sheer bulk of the data.

CONCEPTIONS OF THE USEFULNESS OF PARTICIPATION IN ADULT EDUCATION ACTIVITIES: FROM THE INSIDE LOOKING OUT

Joyce Stalker Costin
Adult Education Research Centre
University of British Columbia

ABSTRACT: This paper revealed the conceptions of the usefulness of participation in adult education held by those who are frequently identified as typical non-participants. It discussed the relationship of those conceptions to the role of adult education in maintaining existing social structures and inequalities.

This research focussed on adults' views of the *usefulness* of adult education activities. It responded to recurring suggestions in the adult education literature that the notion of usefulness is important to understanding adults' participation and non-participation in adult education (Cross, 1981; Darkenwald & Merriam, 1982; Rubenson, 1983). Basically, the concept of usefulness addresses adults' understandings of the results or consequences of participation in adult education activities. This research study chose a non-traditional focus, perspective and methodology to investigate this issue. Different approaches to the study of participation and non-participation were deemed necessary in view of researchers' continuing inability to adequately explain these phenomena. The research question, framed by these non-traditional approaches, was "What are the conceptions of the usefulness of adult education activities held by those who are usually identified as 'typical' non-participants?"

The focus of this study differed from the traditional research approach by examining those who are most frequently identified in the literature as 'typical' non-participants and yet the least frequently researched group--adults with high school completion or less. As well, the data collection and the interpretation of findings focussed on the inter-relationships rather than independent relationships of micro and macro factors to participation.

The perspective of this research was also non-traditional. It was based in the interpretive, rather than empirical-analytic perspective and was guided by the particular work of the Swedish Götenborg phenomenographic group. In their terminology, their "second order" (Marton, 1981) research perspective provides information "about how something appears to someone, and is an experiential viewpoint" (Larsson & Helmstad, 1985, p. 6). A basic tenant of that perspective is that individuals' actions can only be understood by determining the meanings which individuals attach to their actions. Central to the concept of phenomenography is the notion of conceptions. Conceptions are the lens through which individuals view their worlds. Conceptions exist in the space between the assumption that all people share the same understandings and that each person shares a unique understanding of items or activities in the world. In other words, there are a limited number of different ways in which the world is experienced or conceptualized. The identification, construction, delimitation and refinement of these views results in descriptive categories that represent the ways in which individuals view the world. These categories are not established prior to the investigation as is usual in the behavioral sciences. For phenomenographists, the categories of description, conceptions, are the results of research. Each conception represents a different layer of organized knowledge about the phenomenon under study and phenomenography aims to describe the variation in those conceptions (Larsson, 1987, p.37). The Götenborg group's research avoids quantitative descriptions of "how much" and concentrates instead on qualitatively different descriptions of "what" (Gibbs, 1982).

The non-traditional qualitative, rather than quantitative methodology of this study was congruent with its non-traditional focus and perspective. A qualitative technique was particularly suited to the study of adults' conceptions, since the meanings that people attach to activities and items are complex, interwoven and thus elusive. This is particularly problematic with this study in which the area of non-participation is sensitive and direct questions may elicit primarily socially acceptable responses (Cross, 1981). Thus, semi-structured interviews were selected as the primary method of data collection. Such interviews are flexible and adaptable to individual situations. More importantly for this study, they permit probing into the context and reasoning behind answers and give insights into the adult's understandings about activities and issues in their worlds, from their own perspective.

METHODOLOGY

Data were collected within the department of a large municipality in British Columbia. The findings of this study are based on interviews conducted with workers within the department who identified themselves as participants (5 men, 5 women) and non-participants (5 men, 5 women). Both male and female workers were interviewed to provide a dual perspective useful for future gender-specific research (Social Sciences and Humanities Research Council of Canada, 1985). Although the respondents varied in age, occupational level, income and length of employment with the organization, it is important to note that they were not meant to be representative of the general population. As Larsson & Helmstad so succinctly stated in relation to a similar study "the small number of individuals interviewed make generalizations impossible from the statistical standpoint. The results should instead be regarded as hypotheses worthy of further inquiry" (1985, p. 7). It is also important to recall that this research was concerned with defining qualitatively different conceptions held by the workers, not the membership of those conception groupings.

The data collection process occurred in two phases. Phase I consisted of a pilot study of the hour long interview schedule with three volunteers. During this phase, questions were eliminated, rephrased, inserted or extended to develop an interview schedule that would both probe effectively and flow naturally. A journal, established during Phase I was also used throughout the period of data collection. It contained information collected from supervisors, personal impressions and untaped comments from the workers. These notes were used to help direct and focus interview questions during the study.

The revised interview schedule was used in Phase II in twenty, hour-long taped interviews with volunteers from within the selected department. Following the methodology of the Götenborg group, this study sought to uncover the workers' views of the usefulness of adult education activities in both indirect and direct ways. Thus, the interview process began in a general way and attempted to develop the adults' lifestory. Initial questions elicited information about their present life situations. Further questions explored plans and expectations for future situations and possibilities. This provided indirect information about the views of the future held by the workers and gave insights into their conceptions of the usefulness of adult education in achieving that future. As well, several specific questions directly examined the workers' views of the usefulness of participation in adult education. They probed the workers' views of the usefulness of participation in adult education in relation to workplace and out-of workplace plans, changes, problems and challenges.

The workers' responses to these indirect and direct interview questions provided the data for analysis. Words, phrases and sentences relevant to the research question were identified and recorded. The taped interviews were reviewed several times to ensure that core meanings had been captured accurately within their context. From this collection of words, phrases and sentences, core meanings were extracted and criteria for each conception were established. Borderline cases were useful in establishing the parameters of the conceptions. Some phrases or sentences represented more than one conception. Alternate and contradictory conceptions emerged, but the focus was on categorizing them, not judging them right or wrong. In brief, this process "involves the reduction of unimportant dissimilarities, e.g. terminology or other superficial characteristics, and the integration and generalization of important similarities, i.e. a specification of the core elements which make up the content and structure of a given category" (Dahlgren, 1984, p. 24). The quotes were sorted several different ways into possible conceptions. Eventually, four categories relevant to the research question were stabilized and refined. Each conception was as homogeneous as possible--internally similar, yet externally differentiated from other groups.

FINDINGS

Conception I: Participation in organized adult education activities to acquire credentials for the workplace

As the interviews were analyzed, it became clear that the workers viewed participation in adult education activities as useful for acquiring the credentials necessary for workplace entry, promotion or stability. The acquisition of the credentials met both explicit and implicit requirements in the workplace. In the first instance, participation in adult education activities satisfied stated educational criterion which were needed to compete for positions in the workplace. The credentials acquired through participation were viewed as symbolic tokens or vouchers which could be exchanged for the right to enter the race for workplace entry, promotion or stability.

Workers also viewed participation in adult education activities as useful for meeting implicit requirements in the workplace. It represented their positive characteristics as workers to their supervisors and Personnnel Officers. It served as a testimonial which assisted them to acquire entry, promotion and stability Fundamentally, participation suggested they had "initiative" and that they were "making an effort."

Conception II: The skills, information and knowledge acquired through participation are useful in their practical application

A second conception held by the workers was that adult education was useful in its application . Workers engaged in adult education activities to acquire skills, information and knowledge that could be put to practical use. These workers had a very utilitarian view of the consequences of participation in adult education. There was a straightforward connection between taking courses and their application. Participants learned the "proper ins and outs" that could be applied to specific workplace or out-of-workplace situations. Workers dismissed as not useful, adult education activities that were not directly involved with their situations. Thus, in terms of the workplace, those who could perform every aspect of their work easily could not imagine any course which might be useful to them.

Conception III: Through participation in adult education activities, one acquires a personal possession

Some workers viewed the consequences of participation in adult education activities as useful assets, forms of personal property or wealth. They were possessions which could not be expropriated by others. The commodity which the workers possessed took the form of acquired skills, information and knowledge. It was clear from their statements that the workers viewed their possession of those attributes as a demonstration of their mastery over a difficult situation. Participation in adult education activities was a way to "prove" something to themselves. This view went beyond the notion of personal growth and suggested control, command and power over the situation.

Conception IV: Participation in adult education activities is useful to allocate status

The fourth conception held by some workers was that participation in adult education activities was a means to acquire status , prestige and social standing. It differentiated between groups of adults and established a hierarchical relationship between social groups. Those who participated in adult education activities acquired a social distinction, a higher social standing, that separated them from those who did not. Participation in adult education activities created differences that resulted in an "us" and a "them."

DISCUSSION:

Given the nature of the workers' conceptions and the themes that dominated them, it is important to examine the extent to which adult education may play a role in maintaining the present social structures and inequalities. It is possible to argue that adult education performs that task efficiently in several ways. For example, by reinforcing cultural beliefs, values and norms, adult education socializes participants into the political, social and cultural principles of our North American society. As the findings revealed, the workers workers viewed the usefulness of participation in adult education in individualistic and competitive, rather than collective and collaborative terms. Workers did not discuss the notion that through their individual participation, they might be able to help the collective of workers or that through collective participation, the collective group or society might benefit. Workers' primary concerns were to apply acquired information, skills or knowledge or the symbols acquired through participation as individuals in a competitive situation. For example, participation was not seen as a vehicle to develop solidarity with fellow workers so that shared problems could be recognized and solutions collaboratively proposed for other workers in similar situations, nor did the workers suggest that collective participation in certain types of adult education activities such as union activities might be useful to the collective. Rather, the emphasis was on improving one's own attributes to ensure a better chance in the competitions for positions and power in the workplace hierarchy. It is possible to suggest that adult education plays a role in reinforcing these views, for workers suggest that it is through their participation in adult education that they acquire the credentials to compete for positions in the workplace hierarchy and the status to compete for positions in the social hierarchy.

Adult education may also serve as an agent of legitimation of the present social structure and associated inequalities by providing an an "axis of achievement" (Parsons, 1959) wherein everyone competes on the same axis to fulfil criteria which permit entry to higher positions in the social structure. If the cognitive and moral criteria, established by those in power, are varied and ambivalent, the criteria are difficult to fulfill. The findings revealed there were vague symbolic values of personal characteristics, status and so on which were attached to participation in adult education and which adults viewed as useful. Thus, adult education supported the process by which ambiguous measures of achievement determined success or failure on the "axis of achievement." In addition, when credentialization is part of the measurement of achievement, those with credentials are often viewed as more deserving of the rewards of society. Ultimately, the distinction between those who participate and those who do not ensures that the losers in the competition more readily accept their lesser positions in society.

As well as socializing learners to their roles in society and legitimizing inequalities, the adult education system may allocate workers to their statuses and roles. As noted above, participation in adult education results in a differentiation between those who participate and those who do not. It is possible to argue that this encourages learners to self-select themselves into situations of lower power, prestige and authority. As well, in lieu of social power, participation in adult education may provide a compensatory sense of personal mastery and ownership which by diverting attention from the divisions that arise, allows the social system to remain unchallenged.

The final way in which participation in adult education may maintain the social system is through controlling access to knowledge. It was clear in the findings that workers were not concerned with participation in adult education activities which would help them to understand the phenomena which directed their environments. In the workplace, for example, their concern was to participate in adult education activities to complement rather than to control the production and distribution of goods in the workplace--a desire which required no changes in the basic power structures of society. Consequently, a small elite group was able to control the environment and social and labor divisions were maintained.

This discussion has focussed on the relationship of the findings to the role of adult education in maintaining existing social structures and inequalities. Although it may be argued that adult education plays a role in altering those structures, the above discussion raises issues which must be of concern to adult educators who have continually professed commitments to notions of social equality. If, as has been suggested here, adults' participation in adult education contributes to the differentiation among groups in society, then adult educators must re-examine and reshape the policies, practices and research approaches that foster that situation. In the final analysis, the extent to which adult educators undertake those tasks will be a measure of their sincerity in proclaiming concern for an equitable society.

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RELATIONSHIP BETWEEN LEARNING STRATEGIES/META-STRATEGIES AND EXPERIENTIAL LEARNING STYLES OF SELF-TAUGHT ADULTS.

Claudia Danis, Professor, University of Montreal

Abstract: The purpose of the research was to identify and compare the learning strategies and meta-strategies used by four successful self-taught adults relying on four different experiential learning styles.

THE PROBLEM

Self-instruction represents an autonomous mode of intervention in which teaching and learning tasks are simultaneously assumed by one and the same agent, the learner. This autonomous way of acquiring, integrating, and using knowledge, attitudes or skills requires the individual learner to be active with regard to the organization, implementation, assessment, and modifications of his/her own course of action. Any further understanding of the factors which account for the various cognitive and behavioral self-instructional tasks could contribute to the actual emerging theory of self-instruction (Martin, 1984).

Kolb's current approach to the investigation of active learning (Shuttenberg & Poppenhagen, 1980) has already proven to be applicable to the study of self-taught adults who learn in non-formal educational settings (Theil, 1984). Kolb's approach is based upon a theory of experiential learning which takes into account the four major modes of learning to be used in specific learning situations (Shuttenberg & Poppenhagen, 1980). These modes reflect both the quality of experiencing (concrete experience (CE) v. abstract conceptualization (AC))and the level of activity (active experimentation (AE) v. reflective observation (RO)). The different combinations of these adaptive modes correspond with specific learning styles. The four experiential learning styles, defined as "an individual's preferred and usual way of adapting to learning situations" (Theil, 1984), are the following: 1-Diverger (CE and RO), 2-Assimilator (RO and AC), 3-Converger (AC and AE), and 4-Accomodator (AE and CE).

Learning strategies may be seen as constituting the operationalization of the various proactive and experiential learning processes involved in self-instruction (Danis & Tremblay, 1985). These strategies, defined as "explicit procedures used to accomplish particular learning tasks", may be divided into two categories: 1-"strategies" which correspond to the acquisition of knowledge, attitudes, or skills as such, and 2-"meta-strategies" which correspond to the learner's awareness of his/her own use of strategies (Meichenbaum et al., 1985). It was hypothesized, based on Kolb's proactive model of experiential learning, that particular strategies and meta-strategies would correspond with particular learning styles. The purpose of the present study was thus to identify and compare the learning strategies and meta-strategies used by four successful self-taught adults relying on four different learning styles.

METHODOLOGY

The method comprised four phases. In the first phase, the data were collected by means of two instruments: a-Kolb's validated "Learning Style Inventory" (Theil, 1984) was administered to 30 self-taught adults and b-the following open-ended question was asked to ten of the 30 subjects in a subsequent interview: "How did you go about learning (the subject matter was specified) on your own?"; the answers were recorded, then transcribed. In the second phase, the data were treated by means of two distinct techniques: a- the results of Kolb's "Learning Style Inventory" were compiled and b- a content analysis of four of the ten subjects' learning experiences was carried out. Each of the four subjects corresponded to one of the four learning styles. This analysis led to the identification of the strategies and meta-strategies used by each subject. In the third phase, the framework of the present research was elaborated inductively from the data that had been categorized by means of the content analysis. The literature regarding strategies and meta-strategies which had been previously reviewed seemed to be mostly limited to formal educational strategies (Simpson, 1981; Jonassen, 1985; Perry & Downs, 1985; Zimmerman & Martinez Pons, 1986; Weinstein, 1987) or to cognitive/information processing strategies and meta-strategies (Rigney, 1985). In the fourth phase, the strategies and meta-strategies of each subject were compared with those of the other three subjects.

The framework comprised eight dimensions. The identified strategies and meta-strategies were related to one or the other of these eight dimensions: 1-general way of proceeding with regard to learning, 2-personality of the learner, 3-learning content, 4-learning formats, 5-resources, 6-output, 7-learning context, 8-orientation/goal of the learner.

Given the exploratory nature of the study, only four self-taught adults were selected and studied with regard to their strategies and meta-strategies. All four subjects had been engaged in long-term learning activities and were socially recognized as experts in their respective fields of learning. They had the following specific characteristics (Theil, 1984) (cf. Table 1):

Learning style	Sex	Age	Schooling	Duration of learning activities	Field of learning
1-Diverger	Male	21	13 years	5 years	Music
2-Assimilator	Male	35	13 years	18 years	Dance
3-Converger	Male	42	9 years	24 years	Making of fishing lures
4-Accomodator	Female	53	11 years	28 years	Group organization

Table 1-Specific characteristics of the subjects

FINDINGS

The major characteristics of the learning style types (Theil, 1984) along with the main strategies and meta-strategies used by the subjects of the present study are presented in this section (cf. Table 2).

In general, a correspondence was found between each subject's learning style and his/her learning strategies and meta-strategies. However, some strategies seemed to be recurring in more than one style. Furthermore, each subject emphasized mostly different dimensions, with the exception of dimension 1-General way of proceeding. The Diverger emphasized the output (6); the Assimilator, the formats (4), and the orientation (8); the Converger, the resources (5), and the content (3), and the Accomodator, the personality (2), output (6), content (3), and context (7). These descriptive findings will require further analysis since they may shed light on significant similarities and differences related to the self-instructional process of adult learners.

(Please proceed to next two pages.)

CONCLUSIONS

In a theory-building perspective, the present research's dynamic way of focusing on the strategies and meta-strategies related to the self-instructional process reveals new aspects, new dimensions, and certain contradictions with regard to our existing knowledge of the phenomenon. All main strategies and meta-strategies will have to be identified, analyzed and verified on a larger population; different learning models will have to be created and/or verified as to their capacity to help identify and understand the prevailing learning strategies and meta-strategies related to the learning processes found in autonomous learning situations, in non-formal educational settings; the link between the acquisition/teaching of learning strategies and the meta-learning manifestations will also have to be studied.

Finally, in a learning-how-to-learn perspective, more study on the various self-directed learning processes in different formal and non-formal educational settings may bring us, educators, to focus our interventions on the teaching of processes/strategies rather than limiting ourselves to the transmission and evaluation of knowledge.

Table 2 - Characteristics of the learning style types and main strategies/meta-strategies used by the subjects (Note: (S): strategy, (M): meta-strategy.)

	DIVERGER (Music)	ASSIMILATOR (Dance)	CONVERGER (Making of fishing lures)	ACCOMODATOR (Group organization)
Learning styles	-imaginative, innovative, learns from specific experiences, uses global perspectives, emotional.	-emphasizes analysis, theory, inductive reasoning.	-emphasizes experimentation, practical application of ideas, problem-solving, uses deductive reasoning, is unemotional.	-is action-oriented, intuitive, likes new experiences and risk-taking, adapts easily to immediate cir cumstances.
1-General way of proceeding	(S)tries out new contents, without previous theory, (S)progresses gradually, choosing increasingly specialized resources & contents;	(M)starts by observation followed by question-posing & imitation of a model;	(S)continuously alternates: experimentation of a new content/acquisition of theory;	(M)mostly learns by doing: starts by action (triggered by contextual events) & readjusts gradually. Considers previous "analysis"to be counter-productive, (M)learns by modeling: only once has acquired experience and is very selective;
2-Personality	(S)takes into account his curiosity & immediate interest to choose his various learning contents;	(S)links his choice of the self-instructional mode of learning to his curiosity, (S)links his interest for travelling to his interest for his learning content;	(S)links his learning content to personality traits(patience, self-control) & to cognitive abilities (memory, comprehension),	(S)is proactive with regard to getting resources or data, (M)readily tries out new situations, new interventions;
3-Learning Content	(S)permanently keeps on the look-out for new learning contents, (M)acquires basic data from resource;	(S)learns various complementary contents, while specializing in one field;	(S)learns contents not directly applicable as well as those that are applicable;	(M)retrieves and transfers past learning contents to new learning/action situations;

(Table 2-Cont'd.)	DIVERGER	ASSIMILATOR	CONVERGER	ACCOMODATOR
4-Formats	(M)gets basic knowledge through formal courses; learns on his own afterwards;	(M)changes formats as he specializes, using increasingly advanced training courses and texts;	(M)uses mostly books & formal courses;	(M)considers "action" to be her main learning format, (S)occasionally, uses formal school format to verify actual way of doing & orientation;
5-Resources	(M)starts learning using mostly human resources and books; keeps on afterwards using mostly books and personal notes;	(M)uses public organizations, libraries; (M)takes the initiative for contacting and consulting experts;	(S)remains flexible regarding the various possible resources available, (S)consults only after having experimented, thus asking specific questions, (M)locates and consults experts;	(M)uses mostly experts and books;
6-Output	(M)focuses mainly on the performance, (M)uses 3 criteria to evaluate his performance:.own feeling,.the public, .his peers	-None mentioned;	(S)evaluates his learnings by focusing solely on the output of his experimentation;	(M)uses 2 criteria to evaluate her output: .own feeling, and .individuals' positive feedback; rejects negative feedback from others
7-Context	-None mentioned;	(S)overcomes difficulties of access to resources & data and, consequently increases his own interest;	(S)applies his learned knowledge and skills at work;	(S)links her learning endeavour to 3 types of difficulties related to her socio-cultural context: being a self-taught adult, a woman/mother, and a volunteer worker;
8-Orientation/ Goal	(S)refers to his goal to select nature of action/contents.	(S)tests his orientation by increasing his commitment in his field.	-None mentioned.	-None mentioned.

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Adult Basic Skills: A Verification

by
Professor Arthur K. Deane
University of Alberta

Abstract

Over the past six years, the Alberta Department of Advanced Education, the Alberta Vocational Centres, the Community Vocational Centres, and the Department of Industrial and Vocational Education of the Faculty of Education, University of Alberta have cooperated in the development of a Catalogue of Adult Basic Skills that an adult living in Alberta would require in order to function effectively and a conceptual model of the inter-relationships of these skills. The adult basic skills have been organized into a catalogue of skills which is serving as the basis for the development of curriculum for the education of adults in Alberta.

The study sought answers to six research questions, summarized as follows;

> Are there different perceptions of the importance of the Adult Basic Skills, and are there differences in comprehension of the conceptual model, as determined by educational level, occupational grouping, and by community, within the sample of 818 Edmonton adults?

Data was gathered by delivering an information package to the homes of 818 respondents who had been randomly selected and contacted by telephone, followed by a personal interview of approximately 1 1/2 hours duration, conducted by 42 trained research assistants. Of the total sample, 770 responses were retained as valid, which contained an age range of 17 to 87 years, with the mean age being 39.8 years, the mode being 35 years, and the total valid sample containing 399 females, and 371 males. All data has been collected, compiled and quantified using computer programming to organize this data.

Background to the Problem

In mid-1981, a series of meetings between the Adult Basic Education (ABE) Steering Committee representing five, adult, provincial vocational centers, Alberta Advancement Education and Manpower and the Department of Industrial and Vocational Education of the University of Alberta were held. The purpose of these meetings was to discuss methods that could be used to identify and analyze those competencies needed by adults to function effectively in Alberta society. More specifically, the intention was to construct and verify a basic source document for future research and for use in curriculum development and improvement of the ABE adult upgrading programs and courses offered at the various Alberta Vocational and Community Centers throughout the province.

Of the various possible approaches to the analysis to be undertaken at this time, it was the Committee's decision to utilize Phases I and II the Competency Analysis Profile (CAP) System developed by Deane and Manuel (1977) to identify and to verify significant adult basic competencies. From this point on, the project followed a series of steps from the development of the initial profile, through its subsequent limited verification and revision with 549 adults, followed by extensive group work by instructional and research staff to develop a catalog of skills, to its current basic research stage. A significant amount of curriculum development based on the skills has been done by the provincial vocational centres. It is significant to note that during the first two years of the analysis phases of the project, the terminology shifted from a focus on competency to adult basic skills.

Research Objectives

The current research project, directed at the urban center of Edmonton, is in direct response to a recommendation stemming from this initial work. At that time, February 1982, it was strongly suggested that the revised second draft of the profile be subjected to an in-depth verification on a larger provincial basis, so as to include responses from other geographic sectors of the province and significant components of Alberta society which were not included in the initial research.

To this end, the Adult Basic Skills Research Project was designed in 1985 and 1986, with data collection activities targeted at an Edmonton, Alberta, sample of 818 adults, commencing in November 1986 and completed in June 1987. Like the research preceding it, one of this project's objectives was to verify the existing "Profile of Adult Basic Skills" for further use in research and applied settings. A second objective was to begin to explore variables such as occupation, education levels, and language/ethnic/cultural influences which may impact on the importance of the basic skills. A third objective has been to involve graduate students with significant Alberta-based research related to adult education.

Introduction to the Problem

The basic skills needed to function in a complex, rapidly changing society have changed and expanded in number concurrent with society. A societal problem facing the province is that the basic skills needed to effectively function in given situations, within changing and increasingly varied contexts, have not been adequately developed by many adults and youth. In part the societal problem results from the lack of a clear, common understanding among Alberta adults of the basic skills important to an adult functioning in our society.

Statement of the Problem

To address this societal problem, the research centered on the verification of important skills, the identification of patterns of commonality and differences regarding the Profile of Adult Basic Skills and a Model of the Interrelationships of Adult Basic Skills within a Total Skill Context.

Seven research questions constituted the problem addressed by this research. The following research question focusing on verification is addressed by this paper. Is possession of the adult basic skills identified on the Profile of Adult Basic Skills important to functioning adequately as an adult?

Methodology

The sample consisted of 818 adult Edmontonians ranging from 17 to 87 years of age randomly sampled from selected community areas. The age mean was 40, the mode 35, and the median 36 years of age. A total of 770 of the 818 respondents were accepted for the study. The 1986 Edmonton Telephone Street Address Directory was used to create a list of potential respondents by address.

Materials: Several documents were developed and refined for use in this study. These instruments included "A Profile of Adult Basic Skills" (Profile), the "Catalogue of Adult Basic Skills" (Catalogue), "A Model of the Interrelationships of Adult Basic Skills Within a Total Skill Context" (Model), the "Interview Questionnaire" and a page of written directions for respondents.

The primary instrument, the Profile, was a 22" by 34" document consisting of three skill clusters with nine skill categories, and a total of 84 basic skills. Each of these basic skills was presented verbally in a box and was followed by a five point rating scale ranging from Very Important to Not Important. It was the respondent's task to answer the question: "What is your opinion regarding the importance of possessing skills or abilities in each area in order to function adequately as an adult?".

The Catalogue was an 8 1/2" by 11", 21 page document provided primarily as a reference tool when specific adult basic skills were unclear, ambiguous, or of particular interest to a respondent. Each adult basic skill listing was followed by several defining sub-skills, with each sub-skill defined in terms of its various specific skills. The Catalogue was presented and intended for use as a clarification tool to help respondents answer the question for each adult basic skill.

The Model was a 22" by 34" graphic, four color document which attempted to illustrate possible relationships of the adult basic skills to each other and to other skills an adult may possess. Not only did the Model advance this hypothesized relationship, but it also attempted to relate this graphic Model to the Profile and accompanying Catalogue.

The Interview Questionnaire was a 13 page instrument which permitted assessment of the respondent's reliability on the Profile and Model, asked 10 questions about the Model itself, and collected some basic demographic information (e.g. age, sex, employment status, occupation, education, first language, cultural association, community, and mathematical background).

Procedure: Interviewers (42) were hired to gather the research data, and completed a 10 hour, spaced interval, training program. It was their function to contact potential respondents (Ss), secure their participation for about two hours, and conduct the in-person interview portion of the data collection. Great care was taken to apprise both interviewers and Ss of the rights of respondents and the need to observe strict ethical standards in dealing with human Ss. Complete confidentiality and anonymity was guaranteed and ensured.

Through a process of random selection and sampling, potential Ss were identified for interviewers, who then contacted these individuals and secured their cooperation. Once this task had been completed, Ss names were forwarded to the research office, where information packages including the appropriate instruments (the Profile and Catalogue) were couriered to respondents.

As well, an in-person interview appointment was established at this time and it was here that the interviewer arranged to meet personally and individually with each Ss to collect some additional data. More specifically, the interviewer then verified that the Profile had been completed, assessed respondent reliability on this instrument, explained the graphic color Model, asked 10 related questions concerning the model, assessed Ss reliability in this area, and collected some demographic or personal information for analysis purposes. All information was then returned to the research office for coding.

Data Analysis: It was the intention of the researcher to ascertain the perceived importance of the 84 adult basic skills to a normally functioning urban Alberta adult. In addition to these observations, a statistical analysis of main effects is underway (January 1988) to determine skills which are statistically significant to the major variables (occupation, education levels, and language/ethnic/cultural influences) being examined for each of the seven research questions. The demographic variables Age, Sex etc. are being examined singly, and where appropriate, interaction effects will be noted and discussed in future publications.

Description of the Data

Using the mean for each basic skill as a basis for ranking, Table 1 represents the ten adult basic skills selected by the 770 respondents as being most important of the 84 adult basic skills. The designator A-1, A-2, etc. represents the item number of the adult basic skills on the Profile and in the Catalogue.

Table 1

Rank	Profile Designator	Adult Basic Skill
1.	C-3	Parent Effectively
2.	B-4	Find, Apply For, and Get a Job
3.	B-5	Keep a Job (Meet Job Requirements)
4.	A-1	Practice Personal Hygiene
5.	A-3	Responsibly Use Drugs and/or Alcohol
6.	E-4	Responsible and Accountable For Own Actions/Behavior
7.	E-1	Motivate Self, Developing a Positive Self Image
8.	A-4	Practice Traffic Safety
9.	C-4	Meet the Needs of Spouse
10.	D-2	Abide by the Law

Table 2 represents the ten adult basic skills selected by the 770 respondents as being least important of the 84 basic skills.

Table 2

Rank	Profile Designator	Adult Basic Skill
75.	A-7	Assist in the Maintenance of the Health and Safety of the Community
76.	D-5	Interpret Current Events
77.	I-5	Perform Basic Time Conversions
78.	D-8	Assume Responsibility for Individuals with Special Needs
79.	I-7	Understand the S.I. System
80.	I-6	Interpret Charts and Graphs
81.	I-8	Understand Geometric Measurement
82.	D-7	Utilize Community Resources
83.	D-6	Participate in Community Affairs
84.	B-10	Participate in Appropriate Job Related Affiliations and Organizations

Table 3 illustrates the strength and the relative importance of the most important and least important adult basic skills shown in Tables 1 and 2. The ratings of very important, important, and slightly important have been combined and grouped under the heading of "Importance". The organizing headings for the three clusters and nine categories of adult basic skills are included to provide a conceptual framework for the reader.

Table 3

CLUSTER (3) Categories (9) Adult Basic Skills	Number of Respondents				Importance
	Importance f	Neutral f	Unimportant f	Missing f	%
CONTEXT SKILLS					
Category "A" Protect/Maintain Health & Safety of Others					
A-1	765	0	3	2	99.4
A-3	761	2	6	1	98.8
A-4	768	0	0	2	99.7
A-7	714	14	34	5	92.7
Category "B" Earn a Living					
B-4	766	0	1	3	99.5
B-5	765	1	1	3	99.4
B-10	659	7	100	4	85.6

CLUSTER (3)	Number of Respondents				Importance
Categories (9) Adult Basic Skills	Importance f	Neutral f	Unimportant f	Missing f	%
Category "C" Manage Home & Family Responsibilities					
C-3	750	8	8	4	97.4
C-4	758	3	5	4	98.4
Category "D" Function as a Citizen					
D-2	764	2	3	1	99.2
D-5	718	6	44	2	93.2
D-6	678	10	80	2	88.1
D-7	681	14	74	1	88.4
D-8	699	20	49	2	90.8
INTERPERSONAL SKILLS					
Category "E" Develop Self					
E-1	764	1	2	3	99.2
E-4	766	1	1	2	99.5
Category "F" Relate to Others	No skills in top 10 or bottom 10 of 84 adult basic skills.				
FOUNDATION SKILLS					
Category "G" Learn How to Learn	No skills in top 10 or bottom 10 of 84 adult basic skills.				
Category "H" Communicate	No skills in top 10 or bottom 10 of 84 adult basic skills.				
Category "I" Use Mathematics					
I-5	681	19	64	6	88.4
I-6	681	18	64	7	88.4
I-7	645	61	52	12	83.8
I-8	645	20	99	6	83.8

Initial Conclusions

At the writing of this paper analysis work is still in the early stage. Initial conclusions are that the urban sample (Edmonton, Alberta) has provided data to indicate all the skills which were identified between 1981 and 1986 are considered to be of importance. Even the least important skill, item B-10, "Participate in Appropriate Job Related Affiliations and Organizations", was considered to be slightly important by 352 respondents, important by 257 respondents, and very important by 50 respondents. This research would indicate that possession of the adult basic skills identified on the Profile of Adult Basic Skills is important to functioning adequately as an adult in Edmonton, Alberta.

SITUATION ANALYSIS FACTORS AFFECTING PROGRAM DECISIONS IN THE COOPERATIVE EXTENSION SYSTEM

David Deshler, Associate Professor, Cornell University
Deborah Wood, Graduate Student, Cornell University

ABSTRACT

Findings from naturalistic and survey research among administrators, agents, and volunteers in the Cornell Cooperative Extension system are reported. The focus was on the identification and relative strength of situation analysis factors that respondents considered to be "in use" when making decisions to implement or not to implement new program proposals. Factors associated with an internal organization perspective were judged to have more influence in decisions to implement new programs than factors associated with personal or technical perspectives.

STATEMENT OF THE PROBLEM

A brief review of literature on program development in adult education suggests that most models are based on logical factors that "should" be considered in situation analysis leading to decisions TO implement or NOT TO implement programs (Boyle, 1981; Boone, 1985; Forest, 1988). This paper reports research, conducted in the New York State Cooperative Extension system, which identified factors "in use" in Extension program situation analysis that administrators, agents and volunteers reported to have considered while making implementation decisions during the previous year on specific new program proposals. This research is intended to contribute to findings on operational decision-making processes of adult educators conducting situation analysis as a critical step in the program development processes.

OBJECTIVES OF THE RESEARCH

Objectives were to: (1) Identify factors "in use" by practitioners during situational analysis that influenced decisions TO implement or NOT TO implement new adult education programs; (2) Determine the rank order of those factors for specific program proposals considered by practitioners during a previous year; (3) Compare the relative strength of these factors clustered as personal, technical, and organizational factors in decisions to implement programs; and (4) Determine whether internal or external factors were considered to be most important.

METHODOLOGY

The data collection and analysis of this research was conducted in three phases over a two-year period:

Phase I: Naturalistic Inquiry: Situational factors perceived to affect decisions to implement new extension programs were inductively generated through indepth interviews (Dexter, 1970) with a categorical sample of 13 Cooperative Extension agents. These factors were sorted into three major clusters or perspectives: (1) those designated as personal concerns; (2) those designated as technical concerns; and (3) those designated as organizational concerns.

Phase II: Survey Research: Questionnaires with items generated from the naturalistic inquiry were sent to a random sample of 200 field staff agents (N = 130, a 65% response rate), 58 county level Extension administrators (N = 40, a 69% response rate of the total population), and 150 program committee volunteers serving on committees of field staff agents randomly selected for the survey (N = 101, a 67% response rate). A split-plot analysis of variants was conducted for each major research question. The Bonferroni method of multiple comparisons was used to rank the factors. An alpha level of .05 was set as an experiment-wise error rate. (Each question was regarded as an experiment.)

Phase III: Case Studies: On the basis of findings from the survey, six follow-up case studies with different types of programs were conducted, using indepth interviewing to provide further detail on situational factors and to confirm the reality of findings in operational situations.

RESEARCH FINDINGS

Analysis of the transcripts from 13 qualitative interviews with a categorical sample of New York State Cooperative Extension agents provided the basis for the identification of 22 situational analysis factors that agents claimed influenced their decisions TO implement or NOT TO implement new programs. These situational variables were clustered into three categories: (1) personal situational factors; (2) technical situational factors; and (3) organizational situational factors. Within each category the items were differentiated according to whether they were internal to county level Cooperative Extension or external to it in the local community or at Cornell, the land-grant university.

Personal Situational Factors: Internal: (a) potential professional gain; (b) potential professional loss; (c) congruence with agent personal values; and (d) agent personal energy and time. External: (a) potential citizen gain; (b) potential citizen loss; (c) public feeling regarding issue or program; and (d) citizen participation influence.

Technical Situational Factors: Internal: (a) Extension personnel available; (b) agent competence in process skills; and (c) agent competence in technical skills. External: (a) university personnel available; (b) citizen leadership available, and (c) community technical resources available.

Organizational Situational Factors: Internal: (a) county Extension budget resources; (b) county Extension program priorities; (c) job description compatibility; and (d) professional colleague support. External: (a) community view of extension's role; (b) land-grant university budget resources available; (c) support from community groups and organizations; and (d) land-grant university program priorities.

Data analysis of survey responses from agents, county Extension administrators, and volunteers associated with the programs in question provided a rank order or means for the above situational analysis factors. These are displayed in Table 1.

TABLE I
RANK ORDER OF SITUATION ANALYSIS FACTORS

Rank order of means for situation factors that are perceived to influence decisions TO implement new programs distributed according to responses of Cooperative Extension agents, county Extension administrators, and volunteers associated with the programs in question (1 - strong perceived influence, 5 - no perceived influence). N - 130 agent, 40 administrator, and 101 volunteer respondents.

Perceived Situation Factors that Influence Proposed Program Decisions	Agents	Admin	Volunteer
1. Congruence with agent values	1.454	1.923	**
2. Potential citizen gain	1.472	1.769	1.580
3. County Extension priorities	1.754	1.754	2.100
4. Community view of Extension role	1.790	1.790	2.240
5. Job description compatibility	1.818	2.051	**
6. Agent competence in process skills	1.836	1.836	1.780
7. Public Feeling regarding issue	2.000	2.154	2.000
8. Support from community groups	2.063	**	2.120
9. Extension personnel available	2.073	1.949	1.760
10. Professional colleague support	2.081	2.487	**
11. Potential professional gain	2.118	2.205	**
12. Agent personal energy and time	2.172	**	**
13. University program priorities	2.182	2.182	2.080
14. Citizen leadership available	2.236	2.256	2.360
15. Agent competence in technical skill	2.290	2.290	1.820
16. Community resources available	2.291	2.385	2.560
17. Citizen participation influence	2.355	2.103	2.160
18. County Extension budget resources	2.473	2.769	2.840
19. University budget resources	2.555	2.615	2.400
20. University personnel available	3.036	3.179	2.920
21. Potential professional loss	4.009	3.462	**
22. Potential citizen loss	4.118	4.256	4.240

**Deleted from questionnaire

What was the perceived influence of internal versus external situation analysis factors on decisions TO implement new programs? When the means for internal factors referring to above were statistically compared for significant differences with the means for external factors, it was found that internal factors were perceived by all three population groups to be more influential. The evidence is shown in Table 2.

TABLE 2
PERCEIVED INFLUENCE OF INTERNAL VS. EXTERNAL SITUATION ANALYSIS FACTORS IN DECISIONS TO IMPLEMENT NEW EXTENSION PROGRAMS

Overall means of internal and external factors int he decisions TO implement (1 - strong influence, 5 - no influence).

Classification	Mean
Internal	2.0754
External	2.4261

Table 3 presents the results of an ANOVA to test the effects of the internal and external factor classification according to the three populations in decisions to implement new programs.

TABLE 3
ANOVA TABLE TO TEST THE EFFECTS OF THE INTERNAL VS. EXTERNAL SITUATION FACTORS ACCORDING TO THE THREE POPULATIONS IN THE DECISIONS TO IMPLEMENT NEW PROGRAMS

Source	DF	Type III SS	F Value	PR>F
population	2	0.01942445	0.05	0.9505
individuals within	196	66.8353492	1.78	0.0001
inter/exter	1	11.0410429	57.70	0.0001
population, inter/exter	2	0.13098041	0.34	0.7106
error	196	37.50771305	----	----
corrected total	397	116.73477387	----	----

What was the rank order of the perceived influence of situational analysis factors on decisions to implement new extension programs when clustered according to (technical, organizational, and personal) categories according to the three populations (agents, administrators, and volunteers)? For all three of the populations, personal factors were perceived to be less influential than organizational and technical factors for the decision to implement a program. Organizational and technical factors were approximately weighted the same with organizational factors slightly more influential. These findings are summarized in Table 4.

TABLE 4
OVERALL COMPARISON OF MEANS OF PERCEIVED INFLUENCE OF SITUATION FACTOR CLUSTERS (ORGANIZATIONAL, TECHNICAL, PERSONAL) IN DECISIONS TO IMPLEMENT NEW PROGRAMS

Cluster	Mean
Organizational	2.2050 - x
Technical	2.2655 - x
Personal	2.5050 - x

Table 5 presents the results of an ANOVA to test the comparative effects of the three situational factor clusters (organizational, technical, and personal) according to the three populations in the decisions to implement new programs.

TABLE 5
ANOVA TABLE TO TEST THE EFFECTS OF THE THREE SITUATIONAL FACTOR CLUSTERS (ORGANIZATIONAL, TECHNICAL, AND PERSONAL) ACCORDING TO THE THREE POPULATIONS IN DECISIONS TO IMPLEMENT NEW PROGRAMS

Source	DF	Type III SS	F Value	PR>F
population	2	0.16155128	0.36	0.6994
individuals within	196	91.39027792	2.07	0.0001
clusters	2	8.48616474	18.80	0.0001
population cluster	4	1.48535792	1.65	0.1621
error	392	88.47363501	----	----
corrected total	596	191.5292590	----	----

Additional statistical analyses were performed to determine whether the above patterns were perceived to operate with regard to program considerations when a decision NOT TO implement a proposed program was reported. These analyses indicated that the rank order of the situational analysis clusters (organizational, technical, and personal) was different for program decisions NOT TO implement, and varied according to population type (agent, administrator, volunteer). Personal factors were the most important in the decisions NOT TO implement among the agents and administrators. Among these two populations, organizational and technical factors wee perceived as having approximately the same importance. However, among the volunteers, there was no statistically significant difference among the clusters. Another finding was that situational analysis factors appear not to vary according to the focus or subject content of programs. Space does not allow for the presentation of data analysis for these findings.

Phase III of the research process involved qualitative data gathering through interviews with six Cooperative Extension agents who had participated in the survey and who were selected according to dimensions that included, diversity of program effort, and professional affiliation within the Cooperative Extension system (agriculture, home economics, and 4-H). These data provided further detail regarding the nature of situational analysis factors included in the study and confirmed the situational reality reflected in the survey data.

CONCLUSIONS

(1) The situational analysis process for program development is vastly more complex and multi-factorial than had been anticipated in the Cooperative Extension system of New York State.

(2) Factors that are internal rather than external are reported by agents, administrators, and volunteers to have more influence in decisions to implement proposed new programs.

(3) Organizational considerations tend to be perceived to have the greatest influence on decisions TO implement proposed new programs; however, personal considerations tend to be perceived to have the greatest influence in decisions NOT TO implement proposed new programs.

(4) The focus of the program or its content does not tend to affect the importance of different situational analysis factors in decisions TO implement programs. These patterns are anticipated to vary greatly among different organizations.

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Overcoming Barriers to Education for Rural Adults: A Consideration of Public Policy Proposals

Stanley E. Easton, Associate Professor of Secondary Education, Montana State University

Abstract: Participants in a modified Delphi survey identified and evaluated public policies intended to reduce barriers to education and provide adequate educational opportunities for rural adults.

Statement of the Problem

Participants in the National Invitational Meeting on Rural Postsecondary Education, held in 1981, focused on the varied needs of their students and called for individual attention to their unique situations. Despite their individuality, however, rural citizens were seen as sharing the common difficulty of securing access to post secondary education programs suited to their needs. As recently as 1985, a reviewer of the literature found information on adult education programs for rural Americans to be incomplete and inadequate.

During the summer of 1986 a modified Delphi survey was inaugurated to determine barriers to educational programs that affect rural adults and changes and policies required to improve access to education for rural adults in the states of Alaska, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Survey respondents were 217 rural education researchers, community education personnel, rural adult educators, legislators, rural school administrators, county extension agents, and others in the 13 states.

The purpose of this investigation was to determine what public policies were regarded by knowledgeable persons as important and feasible for providing adequate educational opportunities for rural adults in the 13-state region described above.

Methodology

This study was conducted by means of a three-round modified Delphi survey. In the first round, participants were asked to list three to five responses for each of the following items: 1. barriers to education that exist for rural adults, 2. actions that are needed to provide adequate educational opportunities for rural adults, and 3. public policies that are needed to reduce barriers to education and/or improve educational opportunities for rural adults. Responses to the first two items were used to generate a 203-item questionnaire on barriers to education and actions required to provide adequate educational opportunities for rural adults for the second round of the modified Delphi survey. Responses to the third item were consolidated into 89 public policy statements to be evaluated by participants in the third round of the study.

The first round of the survey revealed 78 perceived barriers to education for rural adults. The barriers were classified under five categories: personal/situational, psychological, informational, institutional, and political. First-round respondents also identified 125 actions they thought were needed to provide adequate educational opportunities for rural adults. Those actions related to institutional policies, interagency/interinstitutional coordination, curriculum, alternative delivery formats, information and publicity, funding, student services, instructional personnel, instructional support, and rural elementary and secondary education. In the second round of the survey, conducted in the spring of 1987, all participants were asked to validate the barriers and to judge the desirablity of the actions. One hundred ninety-six individuals responded. The third-round survey was mailed to all 217 first-round participants in June 1987.

Description of the Data

The present paper focuses on the importance and feasibility of 89 proposed public policies as perceived by 175 third-round respondents. Differences in perceptions among three sub-regions and among categories of respondents, as determined by chi square tests of independence, will be reported.

Of the 89 public policy statements generated by the participants, 22 were judged either "important" or "most important" by at least 75 percent of the third-round respondents. Forty-eight statements were similarly judged by 50 to 74 percent of the respondents. Only 19 of the policies were considered "important" or "most important" by less than 50 percent of the participants.

Chi square analyses were conducted for each of the 89 policiy statements to determine whether there were significant differences (.05 level) among the respondents in their perceptions of importance that were related to their geographic locations. A 4 x 3 factorial design was used. Responses to the policy statements were collapsed into four categories: 0 = no response, 1 = "Unimportant" or "Most Unimportant," 2 = "Moderately Important," and 3 = "Important" or "Most Important." The 13-state area was divided into three sub-regions: 1. Plains States (North Dakota, South Dakota, Nebraska, and Kansas), 2. Mountain States (Montana, Wyoming, Colorado, Idaho, Utah, and Nevada), and 3. Northwest Coast States (Alaska, Washington, and Oregon). Chi squares with probabilities of occurring by chance of five percent or less were obtained for only six of the 89 policy statements.

Chi square analyses were also conducted to determine whether there were significant differences (.05 level) in the perceived importance of the proposed policies among the respondents related to the different roles they played in rural education. A 4 x 8 factorial design was used. Responses to the policy statements were collapsed into four categories as described in the preceding paragraph. The participants were divided into eight categories: 1. legislators, 2. adult educators, 3. college and university faculty and administrators, 4. Cooperative Extension Service personnel, 5. rural school teachers and administrators, 6. regional educational service agency (RESA) personnel, 7. state education (SEA) agency personnel, and 8. others. Significant chi squares were obtained for 16 of the 89 policy statements.

The respondents also evaluated the feasibility of the 89 policy proposals. None of the 89 policy statements were considered either "probably feasible" or "definitely feasible" by as many as 75 percent of the respondents. Twenty-six of the proposed policies were rated as feasible by between 50 and 74 percent of the respondents. Of the 26 policies thought to be feasible, 14 were rated as "important" or "most important" by at least 75 percent of the respondents, 12 by 50 to 74 percent of the respondents. The policies that were thought to be both important and feasible by at least one-half of the respondents are listed below:

> Support for state, regional, or national consortia for satellite programs
>
> Federal and state support for student loans and work-study programs for college-bound adult learners
>
> On-the-job training for welfare recipients
>
> Reverse current public assistance policy that penalizes adults on AFDC who wish to obtain further education
>
> Policy to encourage lifelong learning
>
> Community development programs to stimulate community and personal growth
>
> Program of public recognition to reward adult learners

Create a clearinghouse for information on the rural adult learner

State support of viable educational television networks that reach all residents

Certification, or other official recognition, of qualified instructors within rural commuinities

Recognition of comparable experience as equal to academic credentials in the qualifications of instructors for rural adults

Coordinate educational programs for adults with current and projected demand for job skills

Equalize financial aid for part-time and full-time post secondary students

Policies to stimulate collaborative programs involving K-12 and postsecondary educational institutions

Encouragement of rural education options in teacher preparation programs

Federal grants to establish innovative educational programs in rural areas

Funding for research and demonstration of innovative rural educational programs

Support creation of networks of electronically-linked colleges and universities within and among states that would offer joint programs for rural adults

Open high school programs, especially vocational courses, to adult learners

Reciprocity among colleges and universities serving rural areas so that credits may be easily transferred and applied to degree programs

Provide rent-free space in pulbic educational facilities for adult basic education programs

Removal from public assistance programs of provisions that penalize adults for enrolling in educational programs

State commitment to adult basic education

School board policies or state legislation making public school buildings available for adult education programs free of charge

Federal and state commitments to adult literacy programs

Recognition at the highest levels of federal and state governments that rural adults are an important resource and that educational programs are necessary for developing that resource to fulfill its potential

Some policies, however, that were judged to be important were considered feasible by less than 50 percent of the survey participants. Three-fourths of the policies that were rated important by 50 to 74 percent of the respondents were found to be "probably feasible" or "definitely feasible" by less than one-half of the respondents. Eight of the 22 policies that were evaluated as "important" or "most important" by at least 75 percent of the respondents were identified as "probably feasible" or "definitely feasible" by less than 50 percent of them. Those policies are listed below:

State subsidies for educational services in sparsely-populated areas

Alternatives to enrollment-driven funding formulas for educational programs that serve rural adults

Subsidies to rural continuing education courses so that courses need not be self-supporting

Adequate funding for rural libraries and media resource centers

State commitment to support lifelong learning for all persons

Re-allocation of funds from obsolete rural education programs to new programs that meet current needs

Equal educational opportunity for all residents of a state

Increased funding for adult education in rural areas

Chi square analyses were conducted for each of the 89 policy proposals to determine whether there were significant differences (.05 level) among the repondents in their perceptions of feasiblity that were related to their geographic locations. A 4 x 3 factorial design was used. Responses to the policy statements were collapsed into four categories: 0 = no response, 1 = "Probably Infeasible" or "Definitely Infeasible," 2 = "May or May Not be Feasible," and 3 = "Probably Feasible" or "Definitely Feasible." The 13-state area was divided into three sub-regions (Plains States, Mountain States, and Northwest Coast States) as descirbed earlier in this paper. Significant chi square values were obtained for only seven of the 89 proposed policies.

Chi square analyses were also conducted to determine whether there were significant differences (.05 level) in the perceived feasibility of the proposed policies among the respondents related to the different roles they played in rural education. A 4 x 8 factorial design was used. Responses to the policy statements were collapsed into four categories as described in the preceding paragraph. The participants were divided into eight categories as previously described in this paper. Significant chi squares were obtained for 15 of the 89 policy statements.

Conclusions

Each of the policy statements considered in this study was regarded as important and feasible by someone. The 175 participants in the third round of this modified Delphi survey identified 26 of the 89 public policy proposals aimed at improving access to education for rural adults as both important and feasible. Eight of the proposed policies were judged important by no less than 75 percent of the respondents, but were thought to be feasible by less than one-half of the participants. Thirteen chi square analyses out of 178 yielded statistically-significant differences in perceptions associated with the geographic location of the respondents. There were 31 statistically-significant differences of opinion related to the differing roles of the respondents in rural education.

Some Implications of Sternberg's Triarchic Theory For Adult Basic Education[1]

Charlotte Webb Farr, Assistant Professor, University of Wyoming
Charles E. Moon, Associate Professor, University of Wyoming

Abstract: This paper discusses the impact of Sternberg's triarchic theory of intelligence on adult basic education. Based on the experimental work of the authors, conclusions are drawn about the implications of Sternberg's theory for the remedial education of adults.

Current work in psychology that is sure to have an impact on adult basic education (ABE) is that of R.J. Sternberg. His triarchic theory of intelligence suggests an expansive new way of understanding intelligence and the way we learn. Although many theories of intelligence abound, Sternberg's theory is of particular interest because it appears to subsume other theories of intelligence by synthesizing much of what is known about intelligence and by directly addressing the two central issues which emerged from previous speculations about intelligence. Those issues are: (1) the number of factors involved in intelligence, and (2) the presence of differential strategies employed by high ability and low ability performers (Kail & Pellegrino, 1985).

According to Sternberg's (1985) theory, intelligent behavior is contextual, experiential, and componential. The contextual aspect of intelligent behavior refers to the concept that individuals act within a sociocultural context; in responding to the societal environment in which they find themselves, individuals may choose to adapt to that environment, to select another more desirable environment, or try to shape the present environment to better meet their needs. The experiential aspect of intelligent behavior refers to the concept that intelligent behavior is, in part, a matter of experience. Both the ability to accommodate novelty and to automatize familiar tasks are related to the amount of experience an individual has with tasks. Lastly, the componential aspect of intelligent behavior refers to the concept that the sources of individual differences in intelligence may be attributed to one of three information processing components or to a combination of these: metacomponents, performance components, and knowledge-acquisition components.

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"Metacomponents are higher-order executive processes used in planning, monitoring, and decision making in task performance" (Sternberg, 1986, p. 99). Metacomponents are responsible for deciding what to do, how to do it, and if it is done well. "Performance components are processes used in the execution of a task" (Sternberg, 1986, p. 99). Performance components are responsible for doing what the metacomponents indicate should be done. Since many behaviors are possible, the number of performance components is quite large, but with regard to measuring intelligence, a few components are general across many tasks found on intelligence tests. Also, since many different performance components are possible, different components may be used to solve a given task, depending upon the individual's experience and the context of the task.

"Knowledge-acquisition components are processes used in learning new information" (Sternberg, 1986, p. 99). These knowledge-acquisition processes consist of selective encoding, selective combination, and selective comparison. Selective encoding pertains to the ability to separate the relevant from the irrelevant information in a task. Selective combination involves combining the relevant information in some meaningful and appropriate way. Selective comparison entails relating old and new information. Learning occurs when new information is related to old information by means of simile, metaphor, analogy, or modeling.

It is with the knowledge-acquisition components that we are primarily concerned because Sternberg linked knowledge acquisition and vocabulary acquisition. Sternberg proposed that vocabulary acquisition occurs as individuals learn the meaning of words they encounter in context, that that ability is essentially dependent on the ability to draw inferences, and that that ability is reflective of their ability to learn. Sternberg (1985) postulated that vocabulary is acquired incidentally over a lifetime as a result of the three knowledge-acquisition components under the control of metacognitive processes.

Accordingly, an experiment was designed (Farr, 1987) to evaluate the knowledge-acquisition component of Sternberg's theory by testing the following hypotheses:

1. ABE students who receive training in learning vocabulary from context and reasoning skills will score higher on a verbal ability test than students taught by traditional methods.
2. ABE students who receive training in learning vocabulary from context and reasoning skills will score higher on a mathematics problem solving test than students taught by traditional methods.

Additionally, the following three research questions were investigated.

1. Is there a positive relationship between reading ability as measured by the Test of Adult Basic Education (TABE) and vocabulary acquisition as measured by a researcher-constructed test of the ability to infer the meaning of neologisms, with higher ability readers being better able to infer the accurate meaning?

2. Do high ability readers and low ability readers differ in the procedure by which they try to infer the meaning of neologisms? Will high ability readers use a more analytical approach and low ability readers a more holistic approach as defined by van Daalen-Kapteijns and Elshout-Mohr (1981)?
3. Do high ability readers and low ability readers differ in the strategy they use to solve analogy problems, with high ability readers using an exhaustive strategy and low ability readers more likely to use an associative one (Sternberg, 1985)?

The experiment was patterned after work of predecessors of Sternberg, Werner and Kaplan (1967) and van Daalen-Kaptiejns and Elshout-Mohr (1981). Affirmative answers to the three research questions would lend support to Sternberg's theory by replicating their findings. Werner and Kaplan's (1967) work is very significant to Sternberg because Werner and Kaplan designed the initial study using neologisms as a means of evaluating subjects' abilities to decontextualize or infer the meanings of words. Their paradigm exposed the role of inference in acquisition of word meaning from context. Werner and Kaplan (1967) found that performance improved with age. van Daalen-Kaptiejns and Elshout-Mohr (1981) elaborated on the Werner/Kaplan paradigm. They found individual differences in the strategies used by high verbal and low verbal subjects to solve the problems.

Subjects were 40 adults who were enrolled in adult basic education/general educational development (ABE/GED) classes at a community college in two western towns who had returned to school to upgrade their skills or to acquire a GED. The majority were White, but about one-third were minorities, including Black, Hispanic, and Oriental. Many had personal or social problems, including substance abuse and/or a history of violence. The subjects ranged in age from 17 to 53. Adults from ABE classes were chosen for the experiment because this population is very much in need of innovative approaches to learning, traditionally not being successful in school yet in need of skills for employment or effective living.

The basic experimental design was a 2x3 factorial multivariate analysis of covariance (MANCOVA) design using nonequivalent groups (Huck, Cormier, & Bounds, 1974), with inferencing training and traditional training (control group) representing the levels of the manipulated independent variable and high, middle, and low levels of reading achievement included to control one source of extraneous variance. The verbal and mathematics pretests were covariates, and the parallel-form verbal and mathematics posttests were analyzed simultaneously. Mathematics problem solving was included as a dependent variable in order to ascertain if training in inferencing in language acquisition would be reflected in other areas of learning. In order to secure the cooperation of instructors who felt random assignment of subjects would be disruptive to their classrooms, intact groups were used. The treatment and control conditions were randomly assigned to groups.

The quasi-experimental design and random assignment of treatments were intended to account for most of the threats to internal validity except selection, history, and mortality (Huck, Cormier, & Bounds, 1974). Because the nature of ABE/GED programs is such that mortality is always a potential problem, two locations were used to insure an adequate sample size after loss due to dropouts.

The treatment consisted of a training sequence patterned after Sternberg (1985) which included modeling of the procedures for learning vocabulary from context with an emphasis on the need for inferencing. Although the exercises emphasized defining words and neologisms presented in sentences, they also included practice identifying cue types. In addition, subjects received instruction in inductive and deductive thinking using exercises suggested by Black and Black (1984) and Harnadek (1977). A small part of the training was training in metacognition, to the extent that subjects were taught to think in terms of what they knew, what they needed to know, and how to go about getting that information.

In contrast, the control group's training was more knowledge based. The control group received more traditional reading/vocabulary instruction using Keys to a Powerful Vocabulary, Level 1 (Maker & Lenier, 1982). This sequence entailed the following: (a) reading a passage; (b) checking comprehension; (c) spelling new words from the passage; (d) defining these words; (e) deriving new forms from these words; (f) filling the blanks in sentences with both the new words and the new forms; (g) additional practice filling blanks in sentences with the new words; (h) looking definitions of the words up in the dictionary; (i) using context cues.

The training sequence for the treatment and control groups averaged two hours a week for approximately eight weeks. Due to the high dropout rate and the open/entry policy of the program, a majority of subjects actually received less than eight weeks of training.

BMDP's MANCOVA program (Dixon 1981) was used to test the null hypothesis of no treatment effect given that the correlation between the verbal posttest and mathematics posttest was .45. The effect of the pretests on the posttests, or the effect of the covariates, was significant [Wilks' lambda = .39, $\underline{F}$ (4,52) = 7.69, $\underline{p} < .001$], but after adjusting for the effect of the covariates and reading level, the effect of the treatments was not significant [Wilks' lambda = .80, $\underline{F}$ (2,26) = .09, $\underline{p} < .05$]. This indicates there was no significant difference between the adjusted mean scores of the control group and the treatment group.

There was no interaction between the treatment and reading level. However, when treatment was controlled, reading level did have a significant effect on the dependent variate [Wilks' lambda = .62, $\underline{F}$ (4,52) = 3.53, $\underline{p} < .05$] and on the mathematics posttest [$\underline{F}$ (2,27) = 7.04, $\underline{p} < .01$]. An inspection of the marginal means over reading levels revealed a linear trend.

Additional analyses of the data were conducted to evaluate the research questions posited along with the research hypotheses. Pearson correlation coefficients revealed that there was a linear relation ($r = .54$, $p < .05$ for the control group and $r = .60$, $p < .01$ for the treatment group) between the TABE total scores and the ability to define neologisms, mythical words, in context. A subjective analysis of the mistakes on the analogy questions and the neologisms confirmed that an apparent relationship existed between these skills and level of performance on the TABE. Looking at low, middle and high performance on the TABE (irrespective of treatment group), not only were there differences in the number of errors, but also in the type of errors.

For instance, an analysis of the types of errors made on neologisms indicated a tendency for those in the high group to use different strategies when inferring the meaning of neologisms than those in the low group. Members of the high group were less likely to insert inappropriate words, choosing to leave the blank empty rather than insert a word that made no sense, whereas members of the low group were more likely to fill the blank with a word that was correct in one sentence but not in the others. For example, many subjects in the low group chose "gift" as the meaning of the neologism "cruness" in the exercise below:

Having the day off is certainly a cruness.
It is a cruness to see old friends at the picnic.
She gave us tickets to the concert as a cruness.
As a cruness he gave us peanut butter cookies.
A cruness is a _______________.

This type of error is consistent with the holistic approach described by van Daalen-Kapteijns and Elshout-Mohr (1981) whereby low verbal subjects tended to focus on the specific meaning of the word in one sentence and then to transform the other sentences to agree with that meaning. Conversely, high verbals were described as using a more analytical approach, decontextualizing the meaning of the word, seeking the lexical rather than a specific meaning.

An analysis of errors made on analogy questions revealed a similar tendency to use different strategies. The high ability group missed an average 1.9 questions. Of those, only 5 were association type responses. The low group, on the other hand, missed an average of 4.7 questions. Of those, 21 were association words used as distractors. Sternberg (1985) attributes low verbals' tendencies to chose solutions based on association to their inability to infer relations between the two pairs of words. He contrasts this with the exhaustive strategy of high verbals where all the options are considered and the inappropriate ones eliminated.

Likewise, another common error consistent with a holistic approach that was made by the low group and not by the high group was to use words which suggest some feeling associated with having a day off such as fun and enjoyment. These words are obviously inappropriate grammatically as well as semantically and yet the low subjects were unable to discern this. The inability to recognize that a word is inappropriate suggests inadequate metacognitive abilities.

Thus, although the results of the experiment were not statistically significant, the subsequent examination of the errors made by subjects at different performance levels (Farr, 1987) was educationally significant. Said examination lends support to Sternberg's theory by suggesting an apparent link between the processes identified by Sternberg as necessary for knowledge-acquisition and performance level.

The implications of this link for adult basic education are numerous. First, since such processes are assumed by Sternberg to be teachable, it implies that ABE students can learn provided they receive instruction in the appropriate skills. Secondly, knowing that individuals process information differently depending on their performance level means that it is possible to identify which skills might be appropriate. Finally, it means there must be new emphasis on teaching inferencing and metacognitive skills before attempts are made to teach content specific skills.

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TOWARD REFINING A THEORY OF INTERDEPENDENCE OF PROVIDERS OF CONTINUING PROFESSIONAL EDUCATION: A CASE STUDY OF SELECTED LUTHERAN SEMINARIES

Trenton R. Ferro

ABSTRACT: This case study investigates the nature of the relationships existing among providers of continuing professional education. The theoretical framework is a model proposed by Cervero and Young and based on research of Schermerhorn. The results of this research confirms the utility of this model while suggesting clarification and expansion.

Research Issues

The quantity of literature devoted to continuing professional education (CPE) has grown considerably in recent years. Some writings have been more general (Houle, 1980; Stern, 1983; Cervero and Scanlan, 1985), while others have been devoted to more specific areas of study, such as the issues of power and conflict in CPE and continuing education (Alford, 1980; Stern, 1983) and the collaboration or interdependence of providers of CPE (Beder, 1984; Hohmann, 1985; Cervero and Young, 1987).

Several researchers have developed models to help organize our understanding of the relationships which do or might exist among providers. Beder (1978, 1984) has proposed an environmental interaction model for agency development. Schermerhorn (1975) lists motivators and determinants which effect the type of interdependent relationships which exist among institutions, and Cervero and Young (1987) have drawn on Schermerhorn to propose a two-dimensional model in which motivators and determinants form one axis and the type or nature of interdependence form the other. All of these models are based upon reviews of the sociological literature on institutions.

The impetus for this study has been provided by this growing interest in, and investigation into, the types of relationships which might exist between and among providers of continuing professional education. The investigation of this topic needs to be conducted in both generic and specific terms. Specialized areas of CPE, such as medicine, nursing, law, and engineering must be studied in order to understand what kind of interrelationships exist among providers, how they come into being and operate, and why these types of interdependencies exist. Then more general conclusions can be drawn from these specific areas of research in order to establish a broader base of knowledge which cuts across and undergirds the full spectrum of CPE endeavors.

One specialized area of CPE which has not been studied from this perspective is that of clergy. The formation of a new Lutheran Church, the Evangelical Lutheran Church in America (ELCA), which began operation in January, 1988, provided an ideal time to investigate its CPE offerings. Since the history of the seminaries and national bodies involved in the formation of this new church has been one of increased cooperation and collaboration, it is only appropriate to study their interdependence as providers of CPE of clergy.

The combination of these two factors--a growing interest in the interdependence of providers of CPE and an available, specific area to study--led to posing certain questions: What type of cooperative, collaborative, or other interdependent CPE activities take place, have taken place, or will take place at the seminaries of the ELCA selected for study? Why were or are these activities undertaken? If they are not undertaken, why are they not? What is/are the nature of these interrelationships? How were they arrived at and developed? What are or have been the results of such relationships?

Research Methodology

The multiple-case, holistic design (Yin, 1984) was chosen as the approach most consonant with the purpose of this study. The use of this type of design (sometimes called "comparative") allowed for literal replication within the study and for comparison across studies. This design, as a result, made the study more robust and provided multiple tests of the propositions posed by this study.

The purpose of this study was to seek possible answers to the questions raised above by investigating three Lutheran seminaries (the "cases") through the use of several probing strategies which would provide an "intensive, thick description and interpretation of the phenomenon so that the reader understands the 'slice of life' . . . investigated" (Merriam, 1985, p. 207). The seminaries designated for study were Luther Northwestern Theological Seminary, St. Paul, Minnesota; Lutheran School of Theology, Chicago, Illinois; and Wartburg Theological Seminary, Dubuque, Iowa.

The framework adopted to provide order to this study is that provided by Cervero and Young (1987). They propose that the type, nature, or level of interdependence (monopoly, parallelism, competition, cooperation, coordination, or collaboration) serve as the dependent variable and that certain motivators and determinants, as enumerated and discussed by Schermerhorn (1975), serve as the independent variables. According to Schermerhorn, "The motivating conditions influencing interorganizational cooperation derive from benefits potentially associated with such activities" (p. 848). Those which he discusses are resource scarcity and performance distress, cooperation seen as a positive value, and extra-organizational force. The three determinants which he outlines are boundary permeability, organizational goals, and actual opportunities for cooperation.

The intent of this investigation was to examine the cases under consideration, looking for the type and extent of interdependence which exists and for the absence or presence of motivators and determinants which would give rise to the type of interdependence present. According to the theoretical framework presented, the lack of motivators should result in a lack of highly interdependent relationships. Likewise, the absence of any determinants, even with the presence of a motivator, should also likely result in the lack of highly interdependent relationships.

However, should at least one motivator and one determinant be present, the likelihood exists that the institution under consideration will be involved in one of the more highly interdependent relationships. As the number of motivators and determinants increases, the greater the probability that the institution is involved in highly interdependent relationships.

Several tactics were used to test the construct validity, internal validity, external validity, and reliability of this case study. These strategies are outlined in Table 1.

TABLE 1

Summary of Phases of Research and Tactics Used for Four Design Tests

Phase	Tactic	Test
Research Design	Use replication logic in multiple-case studies	Construct Validity
Data Collection	Use case study protocol	Reliability
	Use multiple sources of evidence	Construct Validity
	Establish chains of evidence	
	Develop case study data base	Reliability
Data Analysis	Do pattern matching	Internal Validity
	Do explanation building	
	Do time series analysis	
Composition	Have key informants review draft case study report	Construct Validity

Adapted from Yin (1984), p. 36

Data Collection and Analysis

Two-day visits were made to each site. During this time interviews were held with persons identified as responsible for CPE programming and involved in whatever organizational interrelationships might exist, including the president of the seminary and the director of continuing education. In addition, as many documents were gathered as possible (statements of mission and philosophy, announcements and other bulletins, catalogs, and the like), and conversations were held with participants and other interested parties. As it turned out, while participants could offer insight into the CPE programs themselves, they were unable to provide useful information on the topic at hand.

This material was carefully sifted, and from it a site report was prepared for each visit. This report included a descriptive narrative of the institution's CPE program, observations and analysis which attempted to provide a comprehensive summary of the extent and nature of that program, and conclusions drawn from the review of the material which had special bearing on each seminary's relationship with other providers. These site reports, together with a response form, were mailed to those interviewed, as well as to others identified during the visit as persons who might provide useful information and insight. Based on responses returned from these respondents, each site report was edited and corrected.

Cross-site analysis is currently underway. The results of this effort is being tested by the development of an objectifying instrument which will be sent to all the seminaries of the ELCA. With the results of this instrument in hand, the examination of the two-dimensional model used as the theoretical base for this investigation will be completed. This material will be ready for presentation at the conference. However, sufficient work has already been accomplished to point to some conclusions, including suggestions for alterations to, and expansion of, the model.

Conclusions

This model appears to be most serviceable as a descriptive, not a prescriptive, tool. It aids the understanding of existing modes of interdependence, but the existence of certain motivators and determinants does not automatically mean that a certain type of relationship will exist as a result of their presence. In other words, the existence of certain motivators and determinants does not cause, but allows, higher degrees of interdependence. Therefore, the most useful application of this model would seem to be as a evaluation and programming planning tool. Those responsible for an institution's CPE can determine their institution's stance or relationship with present or possible partners and use that information in a more proactive manner.

In order to make maximum use of this model, however, certain refinements and expansions appear in order. First, the existing parameters need further clarification. While the modes of interdependence which are more separatistic (monopoly, parallelism, and competition) are readily easy to define, those which indicate a greater interrelationship (cooperation, coordination, and collaboration) are more difficult to distinguish. They appear more sequential or continuous while the first three are more categorical. These latter modes of relationship require clearer and more utilitarian definitions and distinction of boundaries.

Further clarification and expansion of the list of motivators and determinants might also prove helpful. A number of factors which this study surfaced as having a bearing on an insitution's stance include its history (the type and nature of mergers and other interdependent activity in the past), its geography (the physical relationship to present and possible partners), the personality and authority of the person involved in establishing and maintaining interdependent relationships, the role of alumni (how well they support various kinds of programs), and the overall organizational structure which those responsible for CPE must take into account (both within the institution and beyond). While some of these are intimated already in the present model, their clearer explication would increase its utility.

If this model proves to be an effective evaluation and planning tool, its expansion to a third dimension would increase its applicability. That third dimension would categorize the various types of institutions with which the present institution does or might have interdependent relationships. In the present study these would be the national church and its various divisions, commissions, and synods; sister seminaries in the same church; seminaries of other denominations; colleges and universities in the same church; other institutions of higher education; continuing education centers (which have a unique combination of independence and relationship to the geographical synods); and other agencies. As an aside, the interesting aspect of this parameter is that each of the other institutions or agencies would also possess its own matrix which influences how it relates to others.

A final observation is that different motivators and determinants may exert different pressures and influences on a particular agency--not all carry the same weight--and that the intensity of these pressures and influences will vary from institution to institution. They will also vary from one interdependent relationship to another. Therefore, if the model is to reach its maximum potential, each cell should contain some notation of the strength of the interrelationship and its facilitating motivators and determinants. Even a simple scale of high, moderate, and low would serve for this purpose.

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EFFECTIVE TRAINING FOR MANAGEMENT & NON-SUPERVISORY EMPLOYEES

Reginald Foucar-Szocki, II, Director of Food Systems Management, Syracuse University

Abstract: The purpose of this study was to investigate the perceived effectiveness of methods, techniques and devices used when training management and non-superviosry employees. An instrument was developed and sent to 716 training directors of the largest food service organizations. An eight factor structure of effective approaches for training employees was developed.

INTRODUCTION

Over recent years, video discs, computer assisted instruction, management simulations and video tapes have been widely used in training. These newer trainingdevices and training formats, when added to the older methods of lecture, debate, speech, case study and discussion, provide the field of training with various alternatives to use in particular situations. While the availability of resources, money, personnel and time play a significant part in the choice of one training approach or another, the ultimate criterion for selection must be the relative effectiveness of any given training approach (Ribler, 1983). Verner & Dickinson (1967) and Oddi (1983) recommended that further research is needed investigating appropriate instructional techniques. Oddi stressed that current research has failed to examine the techniques individually. This approach of examining individual techniques can be accomplished most effectively within the context of one field or industry.

One of the largest industries in the United States today is the food service industry. It is massive, employing over 8 million workers, serving over a billion meals per week and government projections indicate that by 1990 nearly one out of every thirteen workers in the United States will be employed by the food service industry (Occupational Outlook Handbook, 1985-1986). Rarely has this multi-billion dollar industry been the focus of any formalized research. In general, the food service industry, is unaware of the relative effectiveness of various instructional approaches used when training its employees. Thus it is important for the food service industry to better understand the training practices currently in use (National Restaurant Association, 1986).

This study serves as a first step toward a better understanding of food service training. It investigated, through the use of expert opinion, the overall effectiveness of various methods, techniques and devices used when training managers and non-supervisory employees in the food service industry.

After an exhaustive examination of published literature on training in the food service industry and a computer search of four data bases related to the fields of training, education and business (Psychological Abstracts, Dissertation Abstract, Social Science Database, and the Business Database Information), no research studies were found on the effectiveness of instructional approaches used in training employees in the food service industry. In general, based on these searches, it is fair to say there is a dearth of research relating to most aspects of the food service industry. However, three research studies were found that examined the relative effectiveness of various training techniques (Carroll, Paine & Ivancevich , 1972; Newstrom, 1980; Neider, 1981), in business and industry as a whole.

Research on Effectiveness of Training Methods

The ground-breaking study by Carroll, Paine, Ivancevich identified expert opinion about the relative effectiveness of nine pre-determined training techniques (case study, discussion, lecture, business games, movie/films, programmed instruction, role playing, sensitivity training and television lectures) to achieve six specified training objectives (knowledge acquisition, changing attitudes, problem solving skills, interpersonal skills, participant acceptance and knowledge retention) by surveying training directors of the 200 largest corporations in the United States. The mean effectiveness ratings of training techniques were statistically compared, and the study provided a relative ranking of the nine training techniques for each of the training objectives.

The intent of the Carroll, Paine and Ivancevich study was to determine the relative effectiveness of specific training techniques for specific training objectives. This intent was accomplished, but the practical utility of the results is questionable. The results of the study take the form of a matrix of 54 cells with each cell containing a one to nine ranking of various techniques for six specific training objectives The findings are difficult to apply in practice because of the obvious lack of parsimony in the presentation of the results. In addition, the study was not comprehensive, since it considered only nine pre-selected training techniques and no devices. Finally, the validity of the objectives must be questioned, since respondents were asked to rate each of the training techniques for six different objectives. Whether respondents could keep these objectives distinct, when they were not defined, is highly suspect.

Newstrom (1980) sought to update the research findings of Carroll, Paine, Ivancevich (1972) by replicating the original study and Neider (1981) nearly simultaneously, patterned a study after Carroll, Paine, Ivancevich. Both 1980 studies asked the respondents to rate the same nine training techniques on their effectiveness in satisfying the same six training objectives. The earlier criticisms of Carroll, Paine, Ivancevich hold true for these two studies as well.

Statement of the Problem and Research Objectives

The overarching purpose of this study was to answer the question, " How effective are various methods, techniques and devices when training employees in the food service industry?" In order to accomplish this purpose four research objectives were accomplished.

1. To develop a profile of effectiveness, based on mean expert ratings, of methods, techniques and devices used in training employees in the food service industry.
2. To attempt to reduce, through factor analysis, the various methods, techniques and devices into a more parsimonious framework based on effectiveness ratings.
3. To develop a profile of effectiveness based on the factors for methods, techniques and devices used in training management and non-supervisory employees in the food service industry.
4. To determine whether there are differences between the factors of effective training for two different groups of trainees, managers and non-supervisory employees.

METHODOLOGY

Instrumentation

In descriptive research of this nature, the notion of comprehensive coverage -- that is, of measuring the effectiveness of as broad an array of methods, techniques and devices as possible -- is essential. The survey instrument developed by Carroll, Paine and Ivancevich (1972) was considered for use in this study, but not selected for two reasons. First, the intent of this study is not one of replication, the confirmation or refuting of their findings. Second, and most important, is that the 1972 study considered only nine pre-selected training techniques and included no training aids. This lack of comprehensiveness necessitated the development of a new survey instrument to determine the effectiveness of a large number of training approaches, not just the nine identified by Carroll, Paine and Ivancevich.

The content of the survey was developed using a three-pronged approach which included: 1) a thorough review of the literature of methods, techniques and devices used by trainers in business industry, 2) expert opinion, and 3) brainstorming sessions with adult education specialists.

The format of the survey was developed using a panel of experts that included senior level trainers of trainers for a major financial institution in the southeast, current members of the

American Society for Training and Development and specialists in the field of adult education research. The goal throughout the development process was the creation of a survey instrument that contained clear and specific directions and would achieve the stated research objectives of the study.

A total of five "draft instruments" were tested, prior to the survey instrument being tested in a pilot study. Following this developmental work on the format and the content of the draft instrument, a pilot survey was ready for testing. Respondents for the pilot were a 6 % (N=46) random sample of the actual study sample, the largest food service operations as listed in the 1986 Dunn and Bradstreet (total population N=762). Using a sub-set of the actual sampling frame allowed for a more accurate prediction of response rate and reaction to the instrument. The 46 randomly selected organizations used in the pilot study were no longer eligible for use in the major study, bringing the final study sample size to N=716.

The goals of testing the validity and reliability of the survey instrument and the mailing procedures were clearly met. The validity of the instrument was determined through subject judgments about the quality of the items (as indicated by the number of missing values and the observed variance of the items). In addition, the reliability of the instrument was calculated using Coefficient Alpha at .80. The mailing procedures were evaluated for accuracy, ease of use and internal record keeping. A 60 % response rate was generated from the pilot.

The pilot instrument was refined by strengthening several survey item definitions. The wording of several other defintions was simplified. The directions were also modified and the Likert-type scale was changed to allow for the selection of "unfamiliar".

Sampling Frame

The sampling frame for this research included all trainers of food service organizations as listed in Dun and Bradstreet's, The 1987 Top 50,000 Companies in the United States, which met the criteria a) that they employed at least 200 employees and b) their major source of revenue was generated from the sale of food. This excluded food brokers, wholesalers, investment groups and consultants.

Currently, 2,436 organizations are listed under the category food service establishments. After an initial screening based on criteria of employee size and source of revenue, 762 organizations remained. Although, 762 organizations met the criteria, the actual sample size of the major study was 716. This reduction was based on the fact that 46 organizations were randomly selected for inclusion into the pilot study and thus were not included in the major study. Thus, barring those respondents used in the pilot study, 100% of the sampling frame were used in this study.

Response Rate

A total of 440 responses, (218 responding to the management survey and 222 responding to the non-supervisory survey)were received. The raw response rate was 61.5 percent and the adjusted response rate was 72.5 percent.

DATA ANALYSIS

All data were coded and entered into a SAS Data Set. Exploratory factor analysis was used to analyze the data. A total of 24 separate solutions were examined, consisting of two through thirteen factor solutions using both orthogonal and oblique rotations. In all cases, the differences between the solutions using oblique and orthogonal rotation were negligible; consequently it was decided to discard the oblique solutions in favor of the more conventional and more parsimonious orthogonally-rotated solutions. Use of the Kasier criterion (which calls for a minimum eigenvalue of 1.0), suggested the retention of 12 factors. However, the resulting structure contained three factors containing two items, seven items which loaded on more than one factor, and three factors that were uninterpretable. A scree test proved inconclusive, in that it suggested possible cut-points at six, eight and ten factors. The ultimate criteria in selecting the number of factors to be retained, however, were simple structure and conceptual meaningfulness. Based on these criteria, an eight factor, orthogonal solution was ultimately identified. Using the eight factor solution with a criteria loading of .50, 27 of the 41 items (65.8%) of the items loaded on one and only one factor. Table 1 summarizes the final factor solution.

SUMMARY AND CRITIQUE OF RESULTS

In this study, survey data were collected from a large national sample of training directors in the food service industry. The survey consisted of 41 items measuring the effectiveness of training methods, techniques, and devices.

As a first step in the analysis, the mean effectiveness ratings and ranks were computed for each item on the survey for training management and non-supervisory employees in the food service industry. The results of this analysis are somewhat useful for identifying the extremes -- those methods, techniques, and devices that are clearly effective and those that are clearly ineffective. However, the results are less than meaningful when considering the remaining approaches. What remains is a lengthy list of methods techniques and devices that are neither clearly effective nor clearly ineffective.

In the second stage of analysis, in order, to achieve greater parsimony and to better apply these findings to practice, factor analysis was conducted. The individual survey items were reduced to an eight factor structure, referred to as the factors of training effectiveness for employees in the food service industry. Those factors included, Textual Materials, Interactive Simulations, Expert Formal Presentation, Visual Lecture Aids, Personalized Experiential Learning, Self-Directed Learning Resources, Impersonal Passive Electronic Media, and Observational Learning. These eight factors can truly be called "factors of effectiveness," in that they are based directly on effectiveness ratings. Consequently, they get below the surface characteristics of training approaches and cut right to the center concern of any training enterprise: effectiveness. See Table 1.

Third, as a way to compare the relative effectiveness of these eight factors, mean item means scores were calculated for each sub-sampling. These mean item means are important as they point out the relative effectiveness of the factor for the items loading principally on the respective factor -- the higher the mean item mean, the more effective the factor is. Personalized Experiential Learning had the highest mean item mean and is clearly identified as effective, for both groups, while Impersonal Passive Electronic Media is the only factor that is clearly ineffective for both groups. The remaining six factors fall between these two extremes and in varying order based upon the population.

Fourth, the mean factor scores for the two groups were statistically compared using *t*-tests. As revealed by the *t*-tests, there are marked differences in the effectiveness of approaches to training, dependent upon the audience being trained. Textual Materials, Impersonal Passive Electronic Media, and Observational Learning were rated significantly more effective for training non-supervisory employees, while expert formal presentation and visual lecture aids were rated significantly better when training managers as opposed to non-supervisory employees.

The interpretation of the findings requires two perspectives. First, a preferred target group, management or non-supervisory, is identified. Within each group, one needs to consider the mean item mean scores and relative ranks for each factor This allows an understanding of which broad approaches (factors) work best for each of the groups. Second, the preferred target group is analyzed by looking at the mean factor score and seeing which group has the positive mean score. An additional consideration, is the results of the t-tests which shows significance; as stated earlier, five of the eight factors were significant at the .05 level.

For example, Impersonal Passive Electronic Media is significant at the .0001 level and shows

TABLE 1

Eight Factors of Training Effectiveness for the Food Service Industry

Loading	Item	Item Mean[a]
Factor I: Textual Material (Mean item mean=2.56)		
.79	Pamphlets	2.49
.77	Manuals	2.69
.74	Diagrams/Illustrations	2.81
.72	Text Books	2.47
.60	Posters	2.26
Factor II: Interactive Simulations (Mean item mean=2.55)		
.74	Gaming	2.47
.73	Simulations	2.72
.72	Role Playing	2.70
.70	Skits	2.29
Factor III: Expert Formal Presentation (Mean item mean=2.22)		
.74	Panel Presentation	2.23
.67	Debates	2.16
.61	Forum	2.41
.52	Lecture/Speech	2.06
Factor IV: Visual Lecture Aids (Mean item mean=2.51)		
.72	Overhead Transparencies	2.53
.67	Flip Charts	2.61
.62	Chalkboards	2.36
.53	Slides	2.55
Factor V: Personalized Experiential Learning (Mean item mean=3.36)		
.72	Apprenticeship Programs	3.46
.69	Hands-On-Training	3.55
.52	Assigned Mentoring	3.08
Factor VI: Self Directed Learning Resources (Mean item mean=2.66)		
.62	Video Disc	3.14
.60	Resource Area/Reading Room	2.40
.50	Programmed Learning	2.44
Factor VII: Impersonal Passive Electronic Media (Mean item mean=1.91)		
.74	Instructional Radio	1.63
.72	Instructional TV	2.18
Factor VIII: Observational Learning (Mean item mean=2.49)		
.64	Exhibits	2.35
.58	Working Models	2.62

Note. Fourteen of the 41 items failed to load on any factor at the criterion level of .50.

non-supervisory as the preferred training group (positive mean factor score); simply stated, this approach works better with non-supervisory employees than with management employees. However, when the mean item mean score is considered, an entirely different picture emerges. Impersonal Passive Electronic Media had a mean item mean score of 1.98 when training non-supervisory employees. Thus one concludes that Impersonal Passive Electronic Media is ineffective for both groups, but if it had to be used, the results would be slightly better if used when training non-supervisory employees as compared to management employees.

Relationship of the Findings to Verner's (1964) Classification Scheme

According to Verner's (1964) classification system, methods identify the ways in which a person or a group of people are organized in order to conduct an educational activity. Techniques identify the ways in which the instructional agent establishes a relationship between the learner and learning task; and devices are instructional aids that extend or increase the effectiveness of methods and techniques but which cannot themselves instruct.

The results of the factor analysis place four factors clearly in the definitional category of devices, (Textual Materials, Impersonal Passive Electronic Media, Observational Learning and Visual Lecture Aids); two in the category of techniques, (Interactive Simulations, Expert Formal Presentation); one as method, (Personalized Experiential Learning) and only one as a combination of method and device (Self-Directed Learning Resources). These results underline the utility and robustness of Verner's system for classifying instructional approaches, yet have the added benefits of an empirical basis for classification as well as more complete articulation

On the surface, Verner's classification system has withstood the test of time as seven of the eight factors of effectiveness developed through factor analysis did not cross definitional lines. However, Verner's system is not fully articulated nor empirically based. The results of this study suggest that adult educators undertake additional research to build effectiveness constructs based upon empirical evidence, thus productively addressing the lexicon dilemma cited by Knowles (1980). The clarity of factors identified by this study suggest that parsimonious factors of effectiveness can be generated for particular industries and possibly for training and adult education as a whole.

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A complete copy of the results are available by writing R. Foucar-Szocki, Director Food Systems Management, 034 Slocum Hall, Syracuse University, Syracuse New York 13244

The process of becoming an adult educator

by Dr. Matthias Finger, University of Geneva[1]

Abstract

The formative processes of twelve swiss german adult educators have been studied through a biographical approach; the present paper will try a first synthesis by identifying three main types of adult educators.

Introduction

This paper relates the first results of an ongoing empirical research with swiss german adult educators.
The aim of this research is to understand **how adults** (who consider themselves adult educators) **have become adult educators**: what are the different personal formative processes leading to this profession? And what are the implications of such formative processes on their practice of adult education?
Ultimately, this research should lead to a complete empirically based typology of swiss german adult educators.

Statement of the problem

In Switzerland adult education is (still) a highly uninstitutionalized field: the profession is not officially recognized and the title "adult educator" is not protected. One single "Academy of Adult Education" offers a three year course ("for people who deal with adults") as a complement to an already existing professional activity. In other institutions, adults who want to become adult educators can follow single courses on special topics.
In other words, as far as now swiss german adult educators did not move into the profession as a result of an institutionalized curriculum. This means that they had mainly become adult educators through a process which cannot be separated from their own personal development. Therefore their adult educative practice is heavily influenced by their own formative experiences.

There are today several thousand persons who practice adult education in the german part of Switzerland (be it in enterprises, in schools, in trade-unions, in churches, in popular universities, etc.). Only a few hundred of them actually also call themselves 'adult educators'.

Besides a better understanding of current adult education practice, such a study of the process of becoming an adult educator will also be useful in order to define a curriculum for future adult educators; by trying to understand what adult educators have felt necessary to learn, it is possible to identify what is more generally necessary in order to become good adult educators.

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[1] Subdivision Adult Education, Faculty of Psychology and Educational Sciences, University of Geneva, 1211 Geneva 4, Switzerland.
Part of this research has been done in collaboration with my colleague Hubert Bausch, to whom I express my thanks.

Methodology

It is obvious that dominant quantitative social science methods are not adequate in order to give us this exploratory understanding of adult educator's formative processes in particular and adult's formative processes in general.

Over years I have developed a research methodology - the **biographical method** - which, I think, could be adequate for this purpose. Let me summarize the philosophy of this method:

- adults know their formative processes and the symbolic environment, within which these processes have a meaning, best themselves.
- Therefore the researcher can have access to these processes only through the understanding the adults have of their processes.
- This adults' understanding is not 'objective' but **retrospective**, i.e. determined by each person's 'here and now-perspective', which in turn cannot be separated from one's life history.
- A so to say more 'objective' understanding of the adults' formative processes can therefore only be obtained after the adults have been critically reflecting upon their 'here and now perspective'.
- This 'critical awareness' is not only the result of a formative process, but also a necessary condition for the biographical research; in other words, **formation and research cannot be separated.**
- This formative dimension is reinforced by the practice of the biographical method within **small groups** (of maximum 8 persons), where each member of the group tries to understand the formative processes of the other ones; this understanding in turn offers every participant the possibility to critically question one's own interpretations from the perspectives of the others.
- Sharing each other's understanding is the necessary condition for **theorizing** each participant's formative process within the biographical group.

This biographical method has been applied in two independent groups of swiss german adult educators (of which one group had five and the other one seven participants). In each of these two groups the research lasted for more than half a year, involving oral and written life histories, as well as oral and written accounts of individual and group theorization (of the formative processes of adult educators).

"Data"

What comes out of this biographical method are not "data" in the traditional meaning of the word; the result is instead a comprehensive description of each adult educator's formative process as a **type**. Each type's formative process is rewritten in a synthetic way, as well as graphically presented. This synthesis contains on the one hand all the **elements** of the (psychological, social and cultural) reality, which have a meaning for the person, and in relation to which adult educators define their own formative processes. It is obvious that the formative process is understood here in its most general form as **the process which forms a person.**

On the other hand this synthesis also contains the **dynamics** of the process, showing in particular the meaning of this dynamics for the person, as well as the direction it leads to.

The word "data" is in fact not perfectly adequate to describe what is elaborated through the biographical method. The so described types are not the result of a collection of information, but rather stem from an interpretation of each person's formative process, i.e. from an interpretation which has been critically validated by the 'biographical group'.

Each type is unique, and it is therefore not very useful here to look at each of them separately. Interesting (intermediary) conclusions can be drawn from some elements all the twelve studied adult educators share.
In a later stage of the research a questionnaire will be used to verify whether this interpretation can be applied more generally to the swiss german adult educators.

Findings

The most important finding is certainly that swiss german adult educators live in fields of fundamental tensions. **By trying to get along, to manage or even to overcome these tensions adults become adult educators.** In other words, the process of becoming an adult educator is at the same time a process through which one's personal identity is developed. It is therefore coherent that adult educators heavily rely on their own significant formative experiences (be they reflected or not) when they practice adult education. That means that they often practice adult education in the same way and according to the same pattern which underlies their own formative processes.

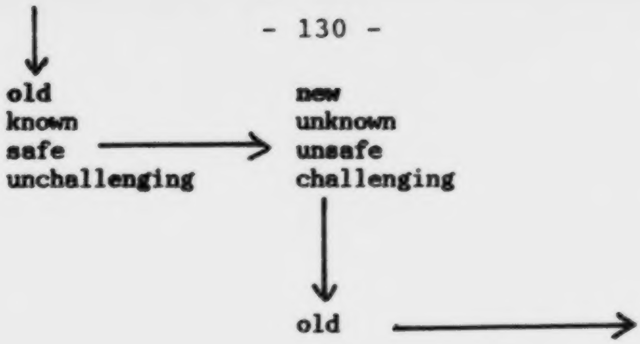
There are three main types of fundamental tensions, within which adult educators live:

1.	**old** known	⟷	**new** unknown
2.	**home** tradition familiarity	⟷	**abroad** modernity movement
3.	**inside** person man	⟷	**outside** society structure, organization institution

These three types of fundamental tensions define three ways of living with these tensions, three different ways of becoming adult educators and therefore three ways of practicing adult education. Together, they define three different types of adult educators.

Type No.1: "The teacher"

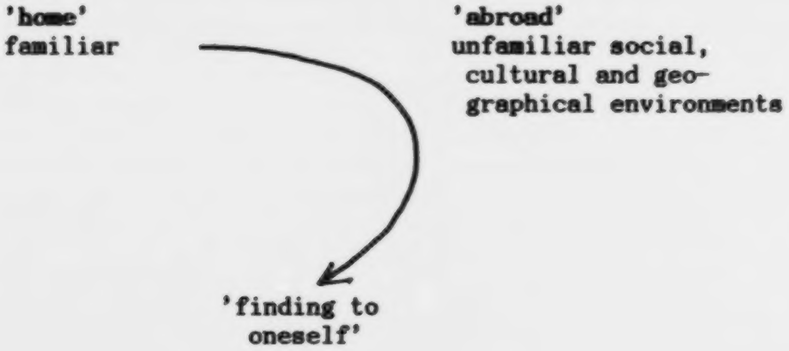
Three out of twelve adult educators (only men) belong to this type: their formative process is not goal-oriented in the sense that it contributes to overcoming, integrating or managing the fundamental tension. With these adult educators we actually cannot speak of a 'formative process', since their 'way of living' with their fundamental tension consists of repeatedly applying the same 'formative mechanism'; this is a mechanism which helps them to transform something unknown into something familiar. It is interesting to observe that these adult educators actually do not see themselves as living in a socio-culturally defined field of tension, and that is probably why this tension can be overcome relatively easily through the following mechanism:



Once they feel safe and unchallenged, these adult educators look for new, more challenging horizons. But when they start to hold foot in this new environment, they gradually leave the old one and everything can start again. This mechanism can be repeated all over the life, during which it can function as a way of coping with what is new, as well as a way of professional and more generally social promotion.
The three adults who follow this pattern became adult educators during one of these steps on the way to something new and to social promotion. They have learned the knowledge which is needed to become good adult educators, and once they feel safe in this field they might change to another profession. They teach to adults in the same way as they have experienced their formation, i.e. in terms of transmission of knowledge.

Type No.2: "The counsellor"

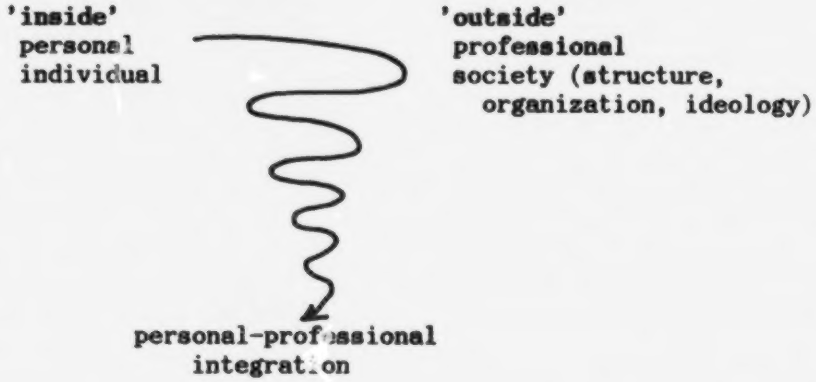
For four out of twelve adult educators (only women) the fundamental tension is experienced in the form of an antagonism between what is familiar ('home') on the one hand and what is unfamiliar ('abroad') on the other. In these adult educators' life histories, the unfamiliar or social pole often takes the form of 'big anonymous towns', 'unintelligible cultural environments', 'unknown social worlds' or more generally geographical and cultural environments they never have got accustomed to. For this type of adult educators 'society' throughout their lives remains unfamiliar and 'abroad'; it is opposed to 'home', which can be defined as the geographical and socio-cultural, mainly local and often familiar, surrounding. This familiar pole is the one to which emotions and feelings are attached to, whereas the social pole is seen as an almost hostile constraint, one has to cope with. The formative processes of this second type of adult educators is therefore oriented towards 'finding to oneself' within and, most of the time, against these unfamiliar socio-cultural constraints. This is a long-lasting formative process (between 10 and 20 years), which sometimes has to be tried twice before being successful.



The four adults who follow this pattern became adult educators "on the way to themselves", i.e. as a result of the kind of educational practices (as students and/or teachers), during which past and present life experiences are reflected and integrated into one's life in a way that they contribute to the formation of a person. In other words, education as they experience(d) it has helped them to 'find to themselves' within their field of fundamental tension. They practice adult education in the same perspective as they have experienced it; and this practice helps them to advance their own formative process.

Type No.3: "The animator"

Five out of twelve adult educators (two men and three women) do not attribute the same connotations to the fundamental tension between the 'individual' and the 'society' as the previous one; the 'individual pole' for example is not considered more familiar than the 'social' one. Both poles, though antagonistic, are considered as ways of looking at the reality, one from 'inside', from the personal point of view, the other one from 'outside', the social and professional point of view. Moreover, the formative processes of these adult educators do not strive for 'finding to oneself' within this antagonistic field, but rather to overcome this antagonism by finding a perspective or a way to live with both poles at the same time. These adult educators do so by elaborating a personal-professional identity, which allows the coexistence of the 'inside' and the 'outside' point of view. Society is perceived not so much as something new or threatening, but as something, which is incompatible with the person; this has to do with the fact that these adult educators see society mainly as formal, institutional, technical and organizational structures. They will face these structures in a first stage by confrontation - i.e. by defining oneself against authorities, ideologies, institutions and persons - and in a second staged by critically reflecting on the so acquired experiences; the outcome of this process are better personally reflected arguments. Translated into personal-professional action within an institutional setting, these arguments already prepare the next confrontation. These two stages alternate constantly and ultimately lead this third type of adult educators towards a personal-professional identity, a process which is seen by them as a process of emancipation, not so much against but rather with society. Therefore their identity, which results from this process is a fundamentally social one.


'inside'
personal
individual
'outside'
professional
society (structure, organization, ideology)
personal-professional integration

The five adults who follow this pattern have become adult educators during their process of constantly navigating between a personal (inside) and a social/institutional (outside) point of view. If the first type of adult educators works with classes and the second type with individuals, this third type prefers to work with groups of adults within institutional settings; they help them to integrate the personal and the institutional point of view and they want to transform the social/institutional reality as a result of the (trans-)formation of the person.
For these adult educators their profession is certainly the most ideal field to promote their own formative processes. It is a field where the constant dialectic between the 'inside' and the 'outside', between the 'personal' and the 'professional', between the individual and the societal point of view can entirely be used for professional (adult educative) purposes. In other words, for these adult educators who have followed this formative process, their professional activity (i.e. confronting and challenging adults) can be fully part of and even further their own formative processes.

Conclusion

One can first observe that the majority of the adult educators (ten out of twelve, i.e. type No.2 and No.3) find their themes and their specific approaches within their own life history, i.e. within their own formative process.
Second, adult educators grow with their adult educative activity, i.e. in a certain sense with the reflection on their own themes and approaches.
Third, for the majority of adult educators, adult education as a professional activity mixes with one's own formation and melts into one single formative process. And it is this unity of professional activity and personal formation which guarantees not only the motivation of an adult educator, but also the fact that the themes they deal with remain linked to the life of adults in formation and therefore have a meaning for them. This unity might also characterize the specificity of adult education compared to other professions.

For most of the adult educators their professional activity plays an important role in their personal development, which is therefore a necessary condition for a 'good' adult education practice. This is at least how it appears in two groups of swiss german adult educators; I wonder what will happen once the process of becoming an adult educator will be entirely the result of an institutionalized curriculum, i.e. more or less separated from the formative process of a person.

Analysis of Certain Educational, Social, and Literacy Characteristics of General Assistance Recipients

James C. Fisher
University of Wisconsin - Milwaukee

Abstract

A sample of 2,000 able-bodied General Assistance recipients selected at random were interviewed regarding their educational, literacy, employment, and social characteristics. High school non-completers were distinguished from completers on variables such as education, literacy, employment, duration of public assistance, and belief in the importance of education.

Introduction

During the past two decades, the lack of basic skills has been recognized in federal legislation as a significant impediment to productivity and employability. The Adult Education Act and its amendments, combined with state and local support, continue to fund programs to eliminate illiteracy among adults by providing instruction leading to the acquisition of a high school diploma or its equivalent. Although estimates of the number of illiterate adults range from 27 to 72 million persons, depending on the definition of illiteracy, about 4 million adults nationwide are enrolled in current programs (Chall, Heron, & Hilferty, 1987, p. 190-1).

The Problem

Review of the literature and observation of the practice of adult literacy education reflect a common assumption that illiterate adults are a relatively homogeneous population drawn from a single monolithic construct. The legislation which supports adult literacy education, the context in which it is presented, and the instructional processes and materials which it uses all seem insensitive to the possibility that adult high school non-completers may possess diverse personal needs or psychosocial characteristics.

This assumption of homogeneity within the adult high school non-completer population was challenged by Martin (1984, 1986, 1987) on the basis of an intensive study of 79 adult high school non-completers. He developed a typology which categorized adult high school non-completers on the basis of psychosocial characteristics such as deviance, self-esteem, goal setting and achieving, literacy and social awareness, and sources of economic support.

Four discrete groups were identified on the basis of their sources of economic support: "Entrepreneurs" were characterized by their financial success, high self-esteem, high goal attainment, active reading habits, and a strong commitment to the goals of society. "Regulars" were characterized by regular employment, self-esteem related to their earnings, no clearly articulated goals, reading mainly for functional purposes, and occasional association with deviant members and groups in society. "Marginals" received public assistance, derived self-esteem from occasional acts of deviance, had no strong goals, and possessed low levels of literacy. Although Marginals were committed to the values of the social system and were sincere in their desire for employment, they were labelled as and were often associated with social deviants by the larger society. The fourth group, "Suppliants," lived from invisible and often illegal means of support, derived their self-esteem from illegal activity, and rejected the values of the mainstream society (Martin, 1984).

Although three of these sources of economic support allow the recipients to be indistinguishable from the larger population, those in the population who receive general assistance are identifiable as a matter of record. That segment of the assistance-receiving subpopulation who have not completed high school represent the Marginal category described by Martin. A study of this group is significant because members of this category, more than any other in the typology, seem to be the focus of the federal legislation designed to increase employability by eradicating illiteracy.

Data Source and Methodology

In order to test Martin's description of the Marginal category in his typology, information was gathered from 2,000 able-bodied General Assistance recipients in an urban midwestern county during a two-month period. This sample was drawn randomly from a population of 7,000 able-bodied persons receiving General Assistance at the time. Interviews with the subjects conducted by the Urban Research Center at the University of Wisconsin - Milwaukee focused on their educational, literacy, employment-related, and social characteristics; in addition, the Wide Range Achievement Test (WRAT) was administered to each subject. The data were analyzed using descriptive statistics and contingency analysis. The Chi Square statistic was used to determine the significance of differences and the Cramer's V statistic was used to measure the strength of association between the high school completion variable and selected other variables. Data describing the high school non-completers were then compared with 1) data describing high school completers and 2) the Marginal category in Martin's typology (1987).

Description of the Data

The Sample

A profile of this sample of the General Assistance population indicated that the median age of the sample was 28, and 82 percent were male. Nearly 14 percent of the population were white, 81 percent black, and 4.3 percent Hispanic. Over 73 percent of the sample indicated that they had never married; 21 percent were divorced or separated.

Over half (56.1 percent) of the subjects had not completed high school, including 8.3 percent who had not completed the eighth grade; 24.8 percent had received a high school diploma, and 8.7 percent a GED certificate. Over 9 percent had attended some college, and .9 percent had graduated from college. Over 26 percent believed that the reason they were unemployed was their lack of education, and approximately 78 percent believed that the more education a person has, the better the job he or she gets. In fact, nearly 8 percent were attending night school to continue their education, and an additional 86 percent indicated they would be willing to do so. Nearly 80 percent said they expected to continue their education, in some way or other, in the near future.

Thirty percent were illiterate as defined by their inability to read at the fifth grade level. The median score on the Wide Range Achievement Test (WRAT) test was 73; the range was 3 to 99. Forty-six percent rated their reading skills as good or excellent, and nearly 53 percent rated theirs as fair or not

Table 1

Chi Square and Cramer's V Statistics
between High School Completion and Selected Other Variables

Variable	Chi Square	Cramer's V	df	N
Age	139.87**	.188	86	1967
Sex	10.48*	.051	4	1957
Race	40.23**	.101	10	1972
State of birth	35.87*	.095	16	1976
Living arrangements	13.85*	.059	6	1966
Place educated	79.79**	.142	8	1969
Trouble with reading	115.14**	.170	4	1976
Trouble with writing	83.67**	.145	4	1975
Trouble with math	83.69**	.145	4	1975
Years on Gen. Assistance	202.59**	.226	134	1974
Previous income	31.78*	.089	16	1972
Family on welfare	22.83**	.076	4	1971
Years on welfare	40.78	.244	52	342
Why without job	27.20*	.083	16	1937
WRAT	383.28**	.320	140	1864
Self-rated reading	290.87**	.273	8	1942
Ever had paying job	14.84*	.061	4	1971
Last job DOT code	312.83**	.319	148	1536
Job before last	211.61**	.325	144	1000
Job before prior job	10.59*	.072	4	1009
More educ.-better job	14.16*	.059	4	1971
Heard of JTPA	21.64**	.104	2	1967
Heard of CETA	38.62**	.140	2	1966
Heard of SYE	20.90**	.103	2	1965
Heard of WIN	21.22**	.103	2	1967
Heard of DVR	8.55*	.065	2	1967

*p .05. **p .001.

too good. Eleven percent said they had difficulty finding or performing a job because of their reading skills, 8 percent because of their writing skills, and 11 percent because of their math skills.

The median length of time subjects received assistance was 8 months; the range was from 1 month to 20 years. Prior to receiving General Assistance, 47.4 percent had received income from paid jobs. Approximately 78 percent of the sample had at some time held a paying job, and 75 percent had once had a full time position. The length of time employed at their last job for 38.6 percent was less than one year, and for 61 percent more than one year. Over half of the sample left their last jobs because they were laid off.

Of the sample, 26.8 percent has been arrested and convicted of a crime as an adult, 8.6 percent had been treated for alcohol or drug abuse, and 6 percent used a health or social service agency for drug or alcohol counseling.

The adult high school non-completers

A comparison of the adult high school non-completers with completers revealed statistically significant differences between the two groups when measured over selected variables. Data are presented in Table 1. The non-completers were underrepresented among subjects in their 30s but overrepresented among subjects in their 40s and 50s. They were predominantly male (84% of the sample) and black (83%). Non-completers were more likely than completers to have been born and to have received their education outside the state in which the interviews took place. They were also more likely to be living with friends as opposed to living with relatives or living alone. Non-completers were somewhat less likely to be treated for alcohol or drug abuse and were somewhat more likely to be arrested and convicted of a crime as an adult than were completers, but neither difference was statistically significant.

Non-completers were underrepresented among those receiving General Assistance for less than one year, but were overrepresented among those receiving General Assistance for 2 years or more. Non-completers were more likely than completers to come from families on welfare and were overrepresented among families who had received assistance 11 years or more. Before receiving General Assistance, non-completers were more likely to have received income from family, other welfare/assistance programs, or from performing odd jobs, whereas completers were more likely to have received income from savings or paid jobs. Approximately 75% of the non-completers had once held a paying job compared with 82% of the completers.

Non-completers were more likely to score in the lowest three quartiles of the Wide Range Achievement Test (WRAT) than completers: 91 percent of the lowest quartile, 78 percent of the second quartile, and 62 percent of the third quartile consisted of non-completers. When asked to rate their own reading ability, non-completers were underrepresented among those answering excellent (29%) or good (40%) but were overrepresented among those answering fair (66%) or not too good (85%). Non-completers were more likely than completers to indicate that they had trouble finding a job or performing a job because of their reading, writing, or math ability. The high school non-completers were also more likely than completers to believe that they had no job because they lacked the education or training to qualify. Non-completers were also more likely to believe that the more education a person has, the better job that person will hold. However, non-completers seemed measurably less aware of programs designed to help them improve their employability. With the exception of meeting health care needs, non-completers were also less likely to use a broad range of counseling and social service programs available to them.

Cramer's V was used to test the level of association between the high school completion variable and selected other variables. The strongest levels of association were found between high school completion and the WRAT scores (V = .320) and between high school completion and the two most recent job positions (V = .319 and V = .325).

In the study of this General Assistance population, non-completers were distinguished from completers on several significant variables: (a) non-completers were more likely than completers to have come from families who had received welfare and were more likely themselves to have received

General Assistance over a longer period of time than the completers. (b) Non-completers had been unemployed, on the average, for a longer period of time than completers. Information about earnings prior to receiving General Assistance suggests that non-completers are more likely to have a history of unemployment. (c) Non-completers read on the average at the fifth grade level whereas completers read on the seventh grade level. (d) Non-completers seemed measurably less aware of programs designed to aid them improve their skills in order to secure employment. (e) Non-completers were more likely to live with friends than alone or with family members, suggesting a lifestyle less conventional than that enjoyed by completers.

Comparison with the Marginal group

Martin (1984) found that the Marginals in his study received public assistance, derived self-esteem from occasional acts of deviance, had no strong goals, possessed low levels of literacy, were committed to the values of the social system, and were sincere in their desire for employment. In this study the subjects were similar to Martin's sample on most demographic and educational measures except gender. They also had about the same level of arrests and convictions of crimes as in the Martin study. However, the level of arrests and convictions of the non-completers was not statistically different from that of the completers in this study, indicating that this level of deviency may be more closely associated with persons receiving public assistance than with those failing to complete high school.

However, Martin's contention that Marginals were committed to the values of the social system and were sincere in their desire for employment may be questioned on the basis of this data. Although 71 percent of the non-completers had once held a full time job, they were also more likely than completers to indicate that they could get more money from welfare than on a job. Most non-completers articulated an awareness that poor literacy skills inhibit the acquisition and retention of good jobs, a perception that level of education and quality of job are closely related, and a willingness and expectation to continue their education. However, their articulation of commonly-held social values is not well matched by steps taken to achieve the goals which those values imply.

Conclusion

The Martin typology has made a seminal contribution to a description of the heterogeneity of the adult high school non-completer population; however, it fell short in regarding all non-completers receiving public assistance as a homogeneous subpopulation. According to the findings of this study, there are several groups within the subpopulation of non-completers receiving General Assistance which differ measurably from each other. For some, receiving public assistance is a way of life, perhaps extending over more than one generation. For others, receiving public assistance is a temporary source of vital assistance between jobs.

The categories in the Martin typology make no reference to changes which occur in the lives of individuals over time. Although the Marginal category has about it a static character, the data from this study indicate that this is not a static group of individuals, since Regulars may lose their jobs and become Marginals and vice versa. That being the case, the main difference between many Marginals and Regulars is temporary: many Marginals are really Regulars who have been temporarily prevented from working through economic forces beyond their control.

This is an important consideration from the perspective of the accuracy and clarity of the typology. If the purpose of the paradigm is to assist educators develop programs for a heterogeneous population, there is obviously a great difference between those who are temporary Marginals and those who have a long-term history of receiving public assistance. The function of literacy training for both the Regular and the temporary Marginal is to increase their present level of productivity and employability, thereby enhancing their lifestyle. On the other hand, the function of literacy training for the long-term Marginal may be to develop skills to help the individual to be employable and thereby to support a significant lifestyle change from dependence to independence.

The critical descripter of the Marginal category is that of source of income. Martin's research indicates that a number of psychographic characteristics are also associated with each category. If, as we have noted, the source of income for many is a changing phenomenon, what of the psychographic characteristics? For example, if a Regular by virtue of temporary unemployment becomes a Marginal, is there evidence that the psychographic characteristics will change along with the source of income?

Of the variables measured in this study, a great number show significant differences between high school completers and non-completers. At the same time, however, there are many characteristics which are similar for both groups. The similarity between the completer and non-completer populations on certain variables raises the question of which reality is greater, that of high school (non-)completion or that of unemployment and General Assistance. The implication of this question may be that members of the Marginal group may have more in common with other completers who receive General Assistance than with non-completers in the other groups of the typology.

Directions for future research include the following: (a) continued examination of the heterogeneity of the adult high school non-completer population; (b) identification of measures to distinguish adult high school non-completers from completers other than by source of income; and (c) definition of the reference groups which influence adult high school non-completers. Until accurate measures are available to describe various segments of the adult high school non-completer population, illiterate adults will continue to be misunderstood by those who would teach them.

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WHAT IS EDUCATION? A CONCEPTUAL ANALYSIS OF ADULT EDUCATION IN NEPAL

Nancy Forrest, Adult Education Research Center, University of British Columbia

Abstract

This study explores the ways in which educational processes and institutions, which have existed for centuries in other societies, have been eroded. It concerns the extent to which this erosion is a product of the exportation of Western technology and models to developing countries and the philosophies, theories and concepts embedded in those models.

Introduction

Every society has its own educational institutions and learning processes be they formal or nonformal, written or oral. In the name of colonialism first and now development, traditional systems and vernacular processes have been subsumed by Western models in many developing countries (Eghbal, 1987). Those who work in the field of adult education also contribute to this erosion.

Within many newly created nation states the rise of a Western educated elite has contributed to the further colonization of various ethnic groups in the name of development. The elite have often been aided in their attempts, via education, to unify distinct ethnic groups into homogeneous masses by foreign experts who bring with them foreign models. Entire systems based on a Western philosophy of education have been exported to many countries under the assumption that there were no indigenous systems in place, or that existing systems were not capable of enabling people to understand the complex world in which they live (Di Bona, 1981). The attitude that tradition bound people are in need of modern education coupled with economic development has often resulted in the disappearance of indigenous forms that may have been better suited to the needs of the societies in which they were embedded.

The disappearance of vernacular processes is a problem that adult educators should be greatly concerned with. Unfortunately, little can be found in the mainstream adult education literature targeting this problem. On the contrary, adult educators seem to adhere to developmental theories which are based on the assumption that participation in adult education programs and the acquisition of various skills (i.e. literacy or technical) are essential for personal, social and cultural growth (Lowe, 1982 and Townsend-Coles, 1977).

What is unsettling about the wholesale exportation of Western models and technology, is not only the erosion of systems and philosophies, but that the concept of education itself is being transformed. The current diploma chase, which is prevalent at home and to a greater extent in many developing countries, is sufficient proof that education is no longer perceived as a process embedded in culture, but rather as a means by which to gain employment and thereby a higher standard of living. This transformation of the concept of education from a vernacular process to a commodity (Illich, 1971) creates a sense of scarcity and polarizes populations, often creating a dualistic society. Forging a relationship between economic development and education serves to cut across diverse groups and encourages a conception of education divorced from culture. As Botkin, Elmandja and Malitza (1981) have noted:

> Nearly all developing countries - and even some of the smaller developed ones - are suffering from cultural schizophrenia. They have indiscriminately discarded or abandoned some valuable cultural traditions. In their stead, they rely on foreign learning and cultural models that are alien to their way of life and thus a major source of incoherence and disorientation. (p. 78)

Nowhere is this more apparent than in a country like Nepal. Based on my experience there, both as a practitioner and observer, I believe that imported (often Western) models of education do not adequately address the problems of rural people, who for the most part live in nonliterate environments, nor does it enhance understanding of their culture and world. On the contrary, many ethnic groups are finding their cultural traditions difficult to preserve in the drive for national development.

Perhaps the concept and practice of adult education in the West, as predominantly skill training, leisure activities or band-aid operations is congruent with the specific socio-economic conditions found there. Focusing on such activities in much of the third world however, is often inappropriate and even dangerous as it can replace traditional processes which may better suit people living in socio-economic and cultural environments different from our own. I am not implying here that there is absolutely no need for skill training or literacy in developing countries, but I am suggesting that national programs which prescribe one type of education for all its people are in danger of destroying educational patterns that are embedded in culture.

Methodology

In general the methodology involved a conceptual reinterpretation of fieldwork conducted as a practitioner in Nepal from 1980 to 1985. The study included:

(1) A critical appraisal of mainstream adult education literature focusing on developing countries.

(2) Interviews with employees of His Majesty's Government/Ministry of Education in Nepal.

(3) A conceptual analysis, both historical and contextual, of traditional forms of adult education as opposed to modern, imported models.

Traditional Education

All societies have a history and philosophy of education. What is conceived of as education in one country may not be so in another. In today's world, Western models of formal schooling have been implemented in every nook and cranny. It is very difficult to speak with people concerning what education is, or was, within their cultural context. The word education has become corrupted and is largely equated or defined as formal schooling. Similarly, adult education is often equated with literacy acquisition.

Nepal, like India, has ancient traditions. Education is one such institution. The Hindus had *gurukala* (continuous contact with a guru or teacher), Buddhists the *gompa* (monastary), and Muslims the *mardasah*. (Islamic school). For purposes of this discussion, however, only the Vedic tradition of

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gurukala will be discussed. It is important to note that before Prithivi Narayan Shah conquered Kathmandu in the 18th century, claiming much of present day Nepal as his kingdom, there was not a political boundary between Nepal and India. The ancient Vedic tradition of India greatly influenced the culture and traditions of Nepal. Concerning education, much of the early years under the Shah dynasty were devoted to consolidating territory. Educational development, except for military training, was not a high priority. In a bloody coup d'etat Jung Bahadur Rana seized control of the country. The Rana regime ruled the country from 1846 to 1950. During the Rana rule education itself was outlawed and those people possessing books did so as the risk of imprisonment.

Prior to 1950, Nepal had no formal educational system. The lack of indigenous universities or institutions and the close proximity of ancient Indian learning centers made it both desirable and possible for Nepalis to study in India. One such center was Benares. Young men, upon completing their studies under the *Brahmanic* system as outlined in the *Upanisads* (Hindu Philosophical Treatises), would return to Nepal as *gurus* (teachers)and form their own *gurukalas*. In this way the institution of *gurukala* was implemented as a form of education in Nepal.

The philosophy of education as outlined in the *Upanisads* does not target adult education specifically. The system is based on a holistic view of a person's life in which each part contributes to the greater whole. According to Sarmah (1978):

> The *Upanisadic* seers consider education as a life long process and divide the life of the individual into four *asrama* (stages) to each of which different duties and obligations are assigned. These four orders are intended for taking man to perfection through successive stages in a progressive manner without ignoring the problem of livelihood, also to awaken the divine man and finally to attain emancipation, the supreme goal of human life. (p. 74)

These four stages include:

(1) *Brahmacaryasram* (student or life of education).

(2) *Grahsthasrama* (householder or married life).

(3) *Vanaprastha* (forest hermit or life in the forest).

(4) *Sannyasasrama* (wandering asthetic or life of detachment).

This system is one that stresses devotion to learning in a *gurukala* during the early years of one's life as a student. Education does not stop at the end of that period. In the householder stage, one is expected to keep in contact with a *guru* and observe various religious rituals. In the hermit stage, a couple (man and woman) will give up their home and hearth to live in the forest. They are not to hoard food but live by foraging for nuts and berries. The practice of such an austere lifestyle is designed to encourage emancipation from worldly (material) goods and to prepare one for the final stage. In the fourth and final stage, the *sannyasin* abandons all worldly goods, including his or her spouse, and wanders as an asthetic from shrine to shrine and village to village. The asthetic carries nothing and subsists on what little food householders can spare. In this way individuals existing in one stage depend on those in others. Asthetics receive food from householders who in turn rely on the asthetics for religious teachings and tales of far and exotic places.

In Nepal this system is not strictly adhered to. However, the conception of the four stages of life and the timing of certain educational experiences are observed by many and especially rural people. Moreover, this concept of education may influence they way in which people, especially adults, view their need for government run literacy campaigns. Participation in adult education classes is typically quite low. Frequent excuses are: I'm too old; I don't need to read and write; or I don't have the time. Yet these same people can recite word for word the great Hindu epics or will sit for hours listening to a *pandit* (priest) or *guru* read from the Vedas. People will stand up until dawn, after working all day in the fields, to watch a travelling theatre group perform or to participate in special festivals. The elderly will travel hundreds of miles, barefoot, through the Himalayas or to foreign lands making pilgrimages to holy shrines. Such activities have been classified as adult education by visiting experts and scholars (Wood, 1976), many which correspond to certain life stages. It would appear that rural villagers can and do find time for those things which they consider necessary for spiritual and cultural growth, but what of modern adult educational activities?

Modern Adult Education

Certainly there were problems with the traditional system. It was exclusively reserved for upper caste men who as students were made to sit at the feet of their *guru* . Until Bhanubhakta, considered the first Nepalese poet, translated the *Ramayana* (Hindu Epic) into Nepali in 1950, the epics were not accessible to the average individual, as he or she relied soley on priests or *gurus* for translation. The translation of this epic into Nepali served as an inspiration for many to learn to read although writing was not considered necessary (Pradhan, 1984). Then in 1951, when King Tribhuvan liberated the country by ousting the Rana regime, modern forms of education, including adult education were implemented.

A conceptual analysis of the term *proudh siksha* (adult education) reveals that it is a modern construct resulting from the marriage of two words which can be found seperatly in ancient Sanskrit texts and have been incorporated into the Nepali language (Turner, 1931). *Proudh* is defined as adult or mature. More importantly it has legal meaning as the age (16 years) at which a man can claim a share of his father's land, irrespective of whether the father is still alive. *Siksha* was defined as education based on the Vedic tradition. It is now used to denote the formal system implemented nationwide in the late 1950's. The concept of adult education then, as a separate category, did not exist prior to the 1950's. Moreover, the word *proudh siksha* is used synonymously with *lekhai - pardhai* which means literally reading - writing. Based on discussions with Ministry officials and local villagers, it appears that adult education is narrowly defined as literacy training.

As already mentioned, participation in organized government literacy projects is typically quite low. Moreover, those who do participate often quickly lapse into illiteracy especially if they do not live in literate environments. Attempts to distribute written materials to villages are often thwarted by the lack of roads and transportation infrastructure. Those villages near road heads may have stockpiles of books and those farther away none. Other complaints about organized programs are that they do not pertain to the day to day lives of the people, whose more immediate concerns are usually health care, agriculture and religion. Yet the government and most of the foreign aid organizations perpetuate the definition of *proudh siksha* as literacy training through the types of adult education programs that are implemented.

It is not being suggested here that literacy isn't important or that adult education can not be useful in alleviating some of the country's problems. What is suggested however, is that villagers' conceptions of education are often based on a philosophy which is holistic in nature, oral in delivery and tied to specific life cycles. A better understanding of this indigenous concept of education might facilitate culturally appropriate educational planning and result in wider participation among rural Nepalis in adult education. As long as adult education is narrowly defined as literacy acquisition this is not likely to occur.

Conclusion

The reduction of diverse populations into homogeneous masses through the use of terms such as impoverished, underdeveloped or disadvantaged, make it easy for the prescription of universal remedies. The result is that imported models, which are not always culturally appropriate, make people reliant on others. This creates a dependent relationship which enables one group to dominate another. Dichotomies such as developed - underdeveloped, literate - illiterate or educated - uneducated are creations of those who believe that their values and way of life is the preferred model. This type of thinking is very dangerous and has resulted in the erosion and often destruction of different systems that do not fit the dominant model. Governments and the organizations which represent them, export entire systems of education to other countries in the belief that they have achieved the best model. The reduction of diverse ethnic groups into universal types serves the colonizer and political rulers well. Aided by imported technology and the philosophical, theoretical and conceptual baggage that go with it, they are often able to impose their values on others in the name of creating national consciousness.

Research into the types of education that already exist in developing countries and how best to use those forms or systems might curb the implementation of foreign models. Without careful weighting of when it is appropriate to use an imported model and when it is not, there is the danger that the variety of indigenous forms will disappear and that cultures will be irreversibly changed. Education is not only a tool of modernization but a means by which cultures renew themselves. Traditional forms of education are not only embedded in and a way of preserving one's culture, but may better enable people to know and name their world. In order to adequately analyze the complex nature of this relationship however, further research must be conducted.

Sureshchandra Shukla (1983) suggests that the current comparative education theoretical framework is not capable of adequately analyzing the third world. He advocates the use of historical and phenomenological approaches to education in order to firmly root the analysis in the specific historical, socio-economic and cultural environments in which it occurs. He also points out that unfortunately, comparative education itself has produced periods where education was seen as a likely partner to development, based on the belief that most third world countries would develop in the same way that the industrialized West had. As already mentioned, many adult educators appear to be basing their assumptions and models for the third world on such belief. Only a reevaluation of our Eurocentric world view will enable us to free ourselves from many of the assumptions with which we operate. I hope that the analysis of adult education in Nepal presented here will encourage such reevaluation.

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RETIREMENT PLANNING:
ISSUES STUDIED AND THE RELATIONSHIPS AND DIFFERENCES BETWEEN THOSE ISSUES AND THE LEARNING APPROACHES USED IN THEIR STUDY AMONG A SELECTED GROUP OF PRE-AND POST-RETIREES

Shirley L. Foutz, Director of Educational Services, Richmond Newspapers, Inc.,
P.O. Box C-32333, Richmond, VA 23293

Abstract

The primary purpose of this descriptive exploratory research was to investigate retirement planning activities among a group of older adults in order to provide information which could be of value to service providers in their structuring of retirement activities for clients.

Statement of the problem

Until this century there was little need for retirement planning, since retirement and death were closely associated. People tended to work until health problems caused them to retire, usually a short time before death. Today the period of healthy functioning has been extended, and people are retiring earlier (Peterson, 1983). On average, a person retires with 20% of life still ahead. Retirement is now more accurately viewed as a normal span of mature life for which preparation must be made in order for it to be meaningful and rewarding (McCluskey & Borgatta, 1981).

Providing employee services is one aspect of the broad human resource development function within an organization. Employees today are demanding better, more comprehensive and personalized services. When these services are offered, both employees and the organization benefit (Tracy, 1981). One of these important employee services is retirement preparation programs. More and more demand for such programs exists among employees (Mikelman, 1981; Randall, 1981). In all likelihood the demand will continue to grow (Olson, 1981). Retirement planning is increasingly viewed as a joint reponsibility of employee and employer (Montana, 1982) with the employer identified as the most preferred service provider (Love, 1984; Ossofsky, 1980). Given this situation, there is a growing need for guidelines to assist human resource development staff in their work of developing, coordinating and implementing these programs (Randall, 1981).

Tracy (1981) argues that regardless of type, effective employee services must be relevant to employee needs, values and perferences as well as company requirements. Effective retirement preparation activities must be built on a base of information that fulfills these criteria. A part of this needed information-base concerns how adults are currently learning about and planning for their retirement. Among the major pertinent questions which this study investigated are: What retirement issues are being studied? How are those issues being studied? What resources are being used to study those ideas?

Much research in the field of adult education indicates that adults tend to approach learning in independent, self-directed ways rather than formal programs (Brookfield, 1984; Penland, 1977; Tough, 1979). Is this true in the area of retirement planning? Is it true for some retirement planning issues, but not for others? Is it true for some groups of employees and retirees but not for others? This research also sought answers to these important questions.

Methodology

The purpose of this research was to investigate which among 25 retirement planning issues (considered important by the National Council on the Aging) are being or have been studied and how those issues were studied by a group of participants who are subdivided by sex, job status (hourly or salaried) and retirement status (pre- or post-retiree). If significant differences and/or relationships were found between certain retirement planning issues and approaches to the study of those issues, then this information could be applied by service providers in designing relevant retirement planning activities.

The population of this study was pre- and post-retirees from Philip Morris, USA in Richmond, Virginia. The total population from which the nonstratified random sample of 480 was drawn is 1477 adult, full-time workers between the ages of 50 and 65 currently employed and 839 retirees who have been retired for up to eight years. The current Pre-Retirement Planning Program (PREPP) has been available to all employees since 1977. Thus, all employees and retirees in the sample have had an opportunity to participate in the voluntary PREPP.

A written questionnaire "Survey to Help Improve Retirement Services" was mailed to sample members following a pilot study. For each of the 25 retirement planning issues, categorized in the seven general areas of financial, health, estate, interpersonal relationship, living arrangements, leisure and work options, and community services, each respondent checked whether any planning had been done on that issue, and, if so, how learning about that issue was approached. Seven possible methods of study were listed, with an "other" option as number 8. The first two methods (participating in the PREPP or in other programs available through churches, community colleges, or other organizations) were considered a formal approach. The other five methods (use of printed materials, news media, human resources -- friends, human resources -- family members, and human resources -- experts) were considered an independent, self-directed approach. Use of both the formal and self-directed approaches for the study of an issue was considered a combination approach. The respondent was directed to check all approaches which were being or had been used for studying each issue.

Content and face validity of the instrument were established by an expert panel of three. A test-retest procedure for establishing instrument reliability showed a 72% consistency of response.

A total return rate of 51% was achieved. Pre-retirees were represented in the study by 122 respondents, 8% of their population, and constituted 52% of the respondent group. Post-retirees were represented in the study by 113 respondents, 13% of their population, and constituted 48% of the respondent group.

Descriptions of which retirement planning issues are being or have been studied and what approaches were used in that study were measured in frequencies and percentages. Phi coefficients were used to measure the strength and direction of association between the dichotomous variables. Two by two chi-square tests measured the differences between subgroups for issues studied, at the $p < .05$ level of significance. A second set 1 X 3 chi-squares measured the relationship between each retirement issue and the approach used by the total group of respondents to study that issue, at the $p < .05$ level of significance. A third set of 2 X 3 chi-squares measured the differences between subgroups in their approaches to the study of each retirement planning issue, at the $p < .05$ significance level.

Description of the data

Study of issues. There were wide differences in percentages of reported study of retirement planning issues when analyzed both as the total group of all respondents and as grouped by the independent variables of sex, job status, and retirement status. When viewed as seven general retirement planning categories, the rank order of study by all respondents was: first, financial planning (75%); second, health care (65%); third, estate planning (62%); fourth and fifth, interpersonal relationships and leisure and work options (both 55%); sixth, living arrangements (44%) and seventh, community services planning (38%).

The largest number of differences within subgroups in the retirement planning issues studied occurred in the retirement status subgroup. At the $p < .05$ level, significantly higher percentages of post-retirees reported studying 20 of the 25 retirement planning issues. Smaller differences were found within the other subgroups. At the $p < .05$ level, significantly higher percentages of women than men reported studying four of the issues: myths and realities of aging, importance of maintaining and/or establishing friendships, impact of losing a spouse and/or loved one, and learning to adjust to more free time in retirement. Significantly higher percentages, also at the $p < .05$ level, of salaried than hourly respondents reported studying the three estate planning issues: preparing legal documents, inheritance concerns, and estate and gift taxes.

Approaches to study of issues. A significant relationship was found between 22 of the 25 retirement planning issues and the approach used to study these issues by all respondents. Nineteen, or 86%, of these 22 issues were more often learned about through an independent, self-directed method. Of the other three significant issues, only one issue, company pension benefits, was reported studied more often through formal programs (42%) than through a combination approach (41%). The study of Social Security benefits was more often studied through a combination of approaches (52%). The issue of adjusting to having more free time in retirement was reported studied about as often by a combination approach (40%) as by a self-directed method (42%).

No statistically significant differences in the approaches used to study the 25 retirement planning issues were found in the independent variable subgroup by sex. Within the job status subgroup, pursuing hobbies and/or special interests and approaches to that issue were found to differ significantly between hourly and salaried respondents. Pre- and post-retirees differed significantly in the approaches used for the study of three issues: company pension benefits, making an investment plan for added income, and adjusting to having more free time in retirement.

Conclusions and implications

Interpretation of data from this study supports the following general conclusions: 1) A majority of all respondents are making or have made retirement plans across a broad range of issues. Financial planning issues are considered of primary importance to respondents, both pre- and post-retired. Health, estate, interpersonal relationships, and leisure and work options are important categories of retirement planning issues which are studied by a majority of respondents. Living arrangements and community services planning issues are of lesser importance to most respondents. 2) There are few differences between men and women and hourly and salaried respondents in their reported study of issues. 3) The percentage of study of many retirement planning issues increases among post-retirees when compared to pre-retirees. 4) Most respondents chose self-directed methods for the study of the great majority of issues, even though a comprehensive formal program which included many of the same issues was available to them. 5) There are few differences between men and women, hourly and salaried, and pre- and post-retirees in their reported approach(es) to the study of issues.

The major findings of this study, a measure of actual retirement planning behavior among a group of pre- and post-retirees, carry important implications for persons charged with the design and implementation of retirement planning activities. Possibly the most important implication lies in the area of program format. While the trend is toward more comprehensive retirement planning programs, data from this research would tend to support the need for limited formal programs, with financial planning issues being the major content area. The same program could also be offered to all participants, given the few differences between men and women and hourly and salaried employees which this study found.

This study revealed an interest on the part of a majority of respondents in the study of a broad range of retirement planning issues beyond financial ones. However, the actual planning behavior reported indicates that these other issues are much more likely to be studied through self-directed methods. Therefore, it would be most helpful if resources for self-directed learning could be provided through the appropriate department. Suggested resources include: 1) resource files with pertinent content on specific planning categories; 2) resource libraries with more in-depth information, including bibliographic services, for a wide range of retirement planning issues; 3) personal learning labs with computer-assisted, possibly interactive, resource programs; 4) media lending libraries with instructional audio and/or video cassettes for home use; 5) information centers with areas for announcements of special television programming, community events, or other important information concerning retirement issues; 6) an ongoing retirement column in employee newsletters which are also mailed to post-retirees, and 7) opportunities for peer resource networks, or networks linking post-retirees who gave information to pre-retirees seeking that information and vice-versa.

Another finding with broad implications is that many retirement planning issues are studied by an increasing percentage of post-retirees into their retirement years. It is suggested that retirement planning practitioners make the learning resources listed above available to post-retirees. In addition, especially where retiree groups meet regularly, surveys of the group's retirement needs would provide relevant data for the design and implementation of ongoing retirement programs and/or activities.

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"MUTUAL ENLIGHTENMENT" IN VANCOUVER, 1886-1916: THE SOCIAL HISTORY OF AN IDEA

Ian Hunt, Assistant Co-ordinator Extended Education, Ontario Science Centre, Toronto, Canada

Abstract: The study summarizes an historical dissertation research project. It describes and explains the idea and the adult educational practice of intentional "mutual enlightenment."

This study examined the social and intellectual history of an apparently disparate group of voluntary associations and their members.[1] The setting was Vancouver, British Columbia, 1886-1916. The city, at its birth in 1886, burst forth from an insignificant lumber camp to become, after 1900, the province's metropolitan centre. Its population, by World War I, exceeded 120,000.[2]

These associations sought to educate their own members, and outsiders, in a variety of matters including the arts, history, science, and public affairs, and physical, vocational, and moral welfare. Since it involved peers, it was "mutual." Even when they had clear missionary overtones, these organizations intended to stimulate further learning and to recruit new members. Thus what I have described and explained as "mutual enlightenment" is fundamental to the whole adult education movement. It is the well-spring of much of the tone and philosophy of adult education of the past 200 years, in Canada, the United States, and elsewhere.

The nature and meaning of mutual enlightenment was shaped by the ethnic and social class compositions of its participants. Vancouver's mutual enlightenment was marked especially by its Anglo-Britannic character--intellectual and organizational traditions imported from Britain or Central and Eastern Canada--and by its middle-class (or aspiring) membership.

The study also examined how the concept "mutual enlightenment" had to be modified to fit these facts. "Mutual enlightenment" is an heuristic concept. It required repeated modification and clarification throughout the study through examples of actual practice. Its definition was thus changed to accommodate the facts, not just meet logical requirements. Its provisional meaning thus became looser in the process in order to account for variations in the approaches by which an association might educate its own members and interested publics.

I took two basic steps in this work.

First, I stipulated some working definitions: "education," "mutuality," and "voluntary association."[3] The study is itself an early approximation of definitions. Through these definitions, I had the tools to discriminate amongst the many kinds of educational agencies and institutions, and to determine those most pertinent to the research.

Second, I looked into Vancouver's past to find organizations that embodied mutual enlightenment.[4] Because the mutual enlightenment phenomenon appeared to be generalized throughout society, I decided to concentrate on ten voluntary associations. These included Vancouver's Art, Historical and Scientific Association, its natural history, literary, public affairs, and musical clubs, and its YMCA and YWCA.

The evidence came from a variety of sources, mostly local public archives, and contemporary local newspapers and magazines. Most useful were social-empirical kinds of evidence, to establish the social context, and intellectual/curricular kinds, to establish the intellectual context. From the social-empirical evidence, I made a collective biography[5] of 219 members of five of the associations. From the biography, I could infer the members' reasons for their actions.

This phenomenon of mutual enlightenment is best understood in a multi-faceted context. This is to reject a certain number of older, too one-sided explanations--notably, the strictly political, sociological, or economic (eg., Industrial Revolution). I chose instead to examine the interrelationships between ideas, and their political, social, and economic contexts, in order to understand turn-of-the-century mutual education.

For instance, Jonathon Rogers, a Methodist, spoke Welsh only until age 16. In 1887, he rode the cow-catcher of the first C.P.R. train into Vancouver to make his fortune. He organized the city's YMCA and was a member of the Burrard Literary Club.[6] For him, the economic context was significant for self-improvement reasons. So too, were the social and religious contexts for moral and recreational reasons.

The well-established Mrs. Gertrude Mellon, on the other hand, referred to several contextual reasons for her instigating the Art, Historical and Scientific Association--notably, the aesthetic, social, and political. Vancouver, to the many like Mrs. Mellon, was the typical ugly and dangerous city. These residents were especially threatened by the uncivilized horde descending from the cars of Mr. Roger's train.[7]

The study's findings, especially through the collective biography of association members, show that certain membership compositions--in class and ethnic make-up, for example--went together with certain programmes and programme types. In particular, these compositions were linked to variations in the degree to which any association restricted its membership and programme participation to specific classes and ethnic groups and to certain "appropriate" programme contents or knowledge. The most revealing contrast here, for example, was between the social class, ethnicity, and religion of the members of the Art, Historical and Scientific Association (AHSA), and of the Young Men's Christian Association (YMCA).

The Art, Historical and Scientific Association (founded 1894) created the most extreme form of what I term a "bi-focal" programme. A bi-focal programme, here, refers to that variation in mutual enlightenment whereby an association organized its programme into separate members-only and extension (for non-members and sometimes including members) components. Extension served missionary or recruitment purposes, or both.

For their members, the AHSA functioned much like a privileged club or Parisian salon. Here they partook through lectures, classes, discussions, and conversaziones, of the "Mysteries" of higher knowledge. In 1909, they enlightened themselves on "The Early Bibliography of the N.W. Coast," by E.O.S. Scholefield (Provincial Librarian); on "Huxley's Life Work," by Professor John Porter; on "Ancient Cities of the Euphrates Valley," by Reverend Hetherington; on "Moral Significance of the Fine Arts," by R.H. Weldon; on "A Trip through West Africa," by S.G.F. White; and on "Wireless Telegraphy," by J.G. Lister.[8]

For the city's "great masses" (its working and lower middle classes), the Association established Vancouver's public museum and art gallery. This fulfilled the members' mission to "improve," "uplift," and inspire" the masses "to pursue studies that raise the mind above the materialising struggle for existence."[9] For the AHSA, "mutual enlightenment," here incorporated the educational "self-help" character of Lord Brougham's "useful knowledge" movement.

The YMCA (founded 1886), in contrast, organized programme extensions expressly to recruit new members--from any class, creed, or religious denomination. The city, to the YMCA, was a dangerous and inherently evil place. The Association, therefore, provided vocational and moral education, and intellectual and physical stimulation to bolster its members' ability to cope and to develop.

For example, the official YMCA programme for 1906-07 claimed that:

> The purpose of this work...is to help [young men] to discover themselves or their special adaptability to various occupations and, through training, to lead them into a congenial and successful life work. In the present age there is everywhere a demand for increased skill and intelligence in labor, and no man can honestly expect promotion without such training.
>
> The higher purpose of the work is to make possible a larger life, a broader mental horizon and the development of a manly Christian character. It is at the same time specially adapted to increase the immediate efficiency and earning capacity of the students.[10]

Of note, the YMCA's Education Department spokesman, B.P. Wintemute, reported to a 1906 Board meeting that this "work...mean[s] much to our City by increasing the skill and intelligence of its employees."[11] Many of Vancouver's leading businessmen and industrialists comprised the YMCA Board.

Each organization's style of mutual enlightenment, in turn, reflected members' national origin, and its religious, and occupational make-up. For instance, the Art, Historical and Scientific Association's more "cultural," esoteric, and even elitist approach to mutual enlightenment is suggested by its proponderance of Englishmen and women, most of whom were Anglicans, and almost all of whom were upper middle-class professionals or the wives of prominent businessmen. This was in a city whose population was mostly Canadian born, and non-Anglican Protestant.

The YMCA, on the other hand, reflected the egalitarian, democratic, and practical values of its predominant "colonial" (*i.e.*, Canadian and Anglo-Celtic), trades and commercial, and non-Anglican Protestant constituencies. YMCA members reflected the moral and pragmatic ideals of twentieth-century Vancouver. Mutual enlightenment, for them, promoted individual health and competence, and conscious moral behaviour. In short, the YMCA was developing and articulating new cultural values and skills for the evolving middle classes.

To conclude, the study shows how the context (expecially as reflected through each organization's membership and programme) limited the impact of mutual enlightenment to those people who held social class and often ethnicity in common. It also provides a conceptually satisfying definition of "mutual enlightenment."

"Mutual enlightenment," briefly, was introduced as the non-formal education of adults through voluntary associations. On the surface, and as implied by "mutual," "mutual enlightenment" was a membership-based programme of organized educational activities. These included pre-arranged lectures, debates, discussions, classes, or concerts; or a formally organized, but subsidiary, club.

It was more complex than this, however. Almost all the associations studied also arranged less formal educational activities. These included events where observers and listeners voluntarily and spontaneously interacted with each other in response to educative art gallery or museum exhibits, or a concert; or within an association's reading room. And further, extending enlightenment to persons outside an association's regular membership was integral to its mission. Even those whose activities most closely approximated a strict interpretation of "mutuality," such as literary and debating clubs, quite commonly opened their meetings to the public and held competitions with other similar societies.

Thus the concept "mutual enlightenment" points to an intentional co-operative exchange of rational knowledge and experience. In some cases it was a formal and highly structured set of activities. In others it represented a co-operative relationship between an association and individuals outside its regular membership, and also amongst those outsiders. In all cases it covers the range of intentional educational work of the associations studied.

Mutual enlightenment, on the whole, however, was of only moderate significance to Vancouver society. It attracted too few people, though many of the members were important locally and provincially. It was generally too introverted and formal in its practice. Too often programmes were split between constituencies. And given its stated aim to foster "a spirit of healthy co-operation among all classes," as claimed by a Canadian Club president, mutual enlightenment must be judged only a limited success.

Nevertheless, "mutual enlightenment" and its associations did generate some "sweet light" in a generally hostile environment. One writer in a local magazine, in his support of literary societies, captured this sentiment. Mutual enlightenment, as practised in a literary society, and

> apart from the social function it may fulfil, has too often been regarded with a passive complacency by the majority...; and partly for this reason it has not fully realised its usefulness. Yet it deserves practical recognition. If not a brilliant electric light[,] it is at least a lamp; and its members, like [Robert Louis] Stevenson's lamplighter, are helping to "knock a luminous hole in the dusk."[12]

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[9] AHSA Minutes, 1 November 1894 (newspaper clipping, nd, np.).

[10] The Vancouver City Young Men's Christian Association, *Plans for Winter and Fall: The Vancouver City Young Men's Christian Association, 1906-07* (Vancouver: The Vancouver City Young Men's Christian Association, 1906), p. 8 in Harry Patten Archibald Collection, Young Men's Christian Association of Greater Vancouver Archives.

[11] Minutes, 15 May 1906, Young Men's Christian Association of Greater Vancouver MSS, UBC.

[12] W.R. Dunlop, "A Plea for Literary Societies," *Westminster Hall Magazine and Farthest West Review* 5 (May 1914): 28.

CRITICAL THINKING, CRITICAL TEACHING, CRITICAL THEORY: DOUBTING AND BELIEVING

Robert P. Inkster, University of Wyoming

Nisi credideritis non intelligitis.

St. Augustine

Abstract: Is there a practical or theoretical limit to criticality in adult learning? An analysis drawing upon the theory of Michael Polanyi suggests that there is, and a reading of proponents of critical thinking indicates that a limit is recognized, although there may be disagreement as to its location.

Critical thinking, critical teaching, and critical theory in adult education would seem to be describing the same things. That they are not is demonstrated by Stephen Brookfield's recent comment that he does not understand the people who talk about critical theory in adult education.

It would be presumptuous for me, out of my own ignorance, to explain critical theory to Brookfield--or to anyone else. But it does appear to me that whether the terms *critical thinking*, *critical teaching*, or *critical theory* are used in talking about adult education, there truly are some common premises, processes, and purposes that people have in mind. Perhaps the most important of these are the following. First there is an epistemological premise. Knowledge is presumed to be socially constituted, subject to constant refinement, growth, and change, rather than static. This premise is not particularly new in adult education. One can find it eloquently stated, for example in the work of Lindeman in the 1920's and of Bergevin in the 60's. One can find it still more rigorously stated in the current work of, for example, Mezirow, Stanage, Collins, and Chene'. However, the premise has been given special currency and vitality by the work of Paulo Freire, beginning with the popular recognition of the English translation of *Pedagogy of the Oppressed*. In Freire's words, "When I . . . [am] with a group of students discussing the political nature of education, or the educational nature of politics, . . . I am *reknowing* what I thought I knew, with students who are beginning to know about these issues" (Shor & Freire 1987, 8-9).

This epistemological premise that our knowledge is socially constituted leads, in due course, to a commitment to a pedagogical process that is dialogical. Freire continues: "What is dialogue in this way of knowing? Precisely this connection, this epistemological relation. The object to be known in one place links the two cognitive subjects, leading them to reflect together on the object. Dialogue is the sealing together of the teacher and the students in the joint act of knowing and re-knowing the object of study. Then, instead of transferring the knowledge *statically*, as a *fixed* possession of the teacher, dialogue demands a dynamic approximation towards the object" (100).

So knowledge is not static, but dynamic and socially constituted, and an appropriate pedagogy is a dialogical process wherein the social construction of knowledge occurs. And what is the purpose of this dialogical pedagogy? Several different words appear in the various literatures, and even the same word may mean different things to different people: Freire's discussion includes the terms liberation, illumination, and transformation (see, e.g. Shor & Freire 1987, 13).

In Brookfield's Developing Critical Thinkers (1987), we find similar assumptions. In fact, they are explicit in his subtitle: Challenging Adults to Explore Alternative Ways of Thinking and Acting. Brookfield asserts that critical thinking lies "at the heart of what it means to be a developed person living in a democratic society" (14). He correlates critical thinking with emancipatory learning, dialectical thinking, reflective thinking, and perspective transformation, all of which can be seen to have the goal of "developing authentic frameworks of understanding" (e.g., 47) that enable adults to engage effectively a complex and changing reality and to act as responsible citizens. If we look at Jonathan Kozol's Illiterate America (1985), Ira Shor's Critical Teaching and Everyday Life (1980), Jack Mezirow's "A Critical Theory of Adult Learning and Education" (1981), and any of the other important recent work that is concerned with critical thinking or uses the term critical or any of its permutations, I believe we will find three articles of faith. First, there is a belief that knowledge is not static but dynamic, growing out of an encounter between a knower and the knower's data. Second, there is a belief in a dialectical pedagogy in which learners use their own knowledge of their world to move toward a truer understanding of the world. Third, there is a belief that this pedagogy is best not only because it is congruent with the basic nature of knowledge but because it is also congruent with the purpose of learning: individual liberation, transformation, empowerment.

The Triadic Structure of Knowledge

The proposition that social reality is socially structured is confirmed by the theory of Michael Polanyi. But this central proposition of critical theory also suggests the limits within which criticality is socially and pedagogically useful and beyond which it becomes an epistemological corrosive rather than a catalyst. The philosophical thought of Polanyi also helps explain this limitation.

At the heart of Polanyi's entire philosophical system lies his proposition that all knowledge either is tacit knowledge or is rooted in tacit knowledge. Tacit knowledge is knowledge that we use in order to know something else. We use it, in Polanyi's terms, subsidiarily, in order to comprehend the meaning of something else, to which we attend focally. For example, when we see a photograph in the newspaper of our favorite sports hero--Denver Broncos quarterback John Elway, say--our focal attention is upon the identity of the likeness. We focus on what one might call the gestalt, or the comprehensive meaning of the picture. We are not focally aware of the dot structure of the half-screen reproduction of the Elway photograph; rather, we are subsidiarily aware of these particular details.

Subsidiary awareness is not to be equated with unawareness: it is not accurate to say we are unaware of the pattern of the ink on the page. If we were literally unaware of the half-tone pattern of dots, we would have no awareness of the picture at all, because the meaning--the Elway identity--resides in that dot structure and is dependent upon it. On the other hand, subsidiary awareness or attention is also distinct from focal awareness or attention. If we get out a magnifying glass and study the dot structure in close, focal detail, or even if we shift our focal attention without the aid of a magnifying glass, then the larger meaning of the dot structure, the identity of the likeness of John Elway, disappears.

We see now a rudimentary dyadic structure that lies at the core of all knowing: everything we know, according to this scheme, is known with or known in terms of something else. That something else, which is the grounds of all our knowing, is the tacit knowledge from which we comprehend the meaning in all we know.

Polanyi also talks about proximate and distal terms. Although his terminology is different here, he is still talking about the same phenomenon: tacit knowledge. Suppose we have an informal experiment where we give two blindfolded people a standard 3/8 inch wooden dowel. We ask these people to describe what they are feeling. In the cases where I have done this experiment, people have replied in terms like these: "It's a long, thin cylinder. It's fairly smooth. One end feels like a factory cut; the other is rougher. It's about three feet long. It's fairly flexible. It feels like it's probably wood."

Now we blindfold two more people and give them each a dowel. But this time we ask them to use the object we have given them to feel their way to the back of the room, describing what they feel as they go. Now we hear a different report, consisting of comments like these: "Okay, here's the edge of the carpet. Now I feel the tile. That must be a desk. Oh-oh, there's somebody's leg. Excuse me. Here's a chair. Oh, now I feel the heater, and this has to be the wall." The content of the report has changed altogether. Yet the sensations impinging upon the people holding the dowels are virtually identical. In both cases, the only data they are sensing are the sensations of a wooden dowel in their hands. But their relationship to the dowel has changed. In other words, the change was in the people themselves. So it now appears that the structure of knowledge is not dyadic but triadic. Knowing is not simply a transaction between proximate and distal terms; it is a transaction between proximate and distal terms controled by an intelligent center of consciousness that selects and attends to these proximate and distal terms according to an overriding purpose.

Still a further level of complexity emerges when we examine the proximate, tacit component of our knowledge. Recall again the example of the dowels. In the first case I said the people's hands, exploring the dowels, were the proximate term. In the second case, the dowels became the proximate term. What, then, happened to the hands? Were they not still a part of the process, feeling the sensations from the dowels? Yes, they were an essential part of the process, a part of the now slightly more complex structure of information, of tacit clues, to which the people attended subsidiarily. They were also aware, subsidiarily, of the movement of the muscles in their arm, shoulder, and hand, and of any resistance to that movement. They were aware of a sense of direction in their exploration, and they were also aware of a mental map of the room where they were. They were aware of the movement of their own bodies as they walked across the room, and aware of their resistance to the pull of gravity. Likewise, when we recognize a set of half-screen dots as John Elway, our tacit knowledge comprises much more than simply the dots. It comprises first our ability to interpret the discrete dots into continuous shades of light and dark and to recognize within those shades the representation of a human physiognomy. Then it comprises our previous encounter with a vast number of human physiognomies, and particularly that of John Elway.

The knowledge which we tacitly evoke and use may come from an almost limitless range of knowledge, beginning with our own bodies and extending through all the physical, intellectual, emotional, and spiritual experience we have had. And without this tacit knowledge and the interpretative framework it provides, any new knowledge or experience we encounter is meaningless.

It is important to emphasize again that Polanyi's epistemological theory, which he describes as personal knowledge, provides striking confirmation of a central epistemological premise of those who talk about critical thinking, critical teaching, and critical theory in adult education: the indispensable role played by the knower in any act of learning or knowing. But at the same time, it illuminates a limit to the effectiveness of criticality as an instrument of knowing. Tacit knowledge, which comprises our individual and cultural heritage, is an essential element in any act of knowing. Therefore, an unbridled criticality that views all tradition, all heritage, skeptically will ultimately turn even on itself and dissolve all meaning. The result will be only a residue of hopeless nihilism. Polanyi had a dramatic term for this apocalyptic phenomenon: the self-immolation of the modern mind.

Ontological Hierarchies

Polanyi's epistemological theory has already spoken to the process by which meaning emerges from atomized data through the intelligent effort of comprehension on the part of the knower. And his ontological theory, which closely parallels his epistemology, sheds additional light on the process of making or of destroying meaning. Polanyi posits a series of ontological hierarchies. At the most basic level are matter and energy: physical quantities in motion according to the laws of physics. At the next level, these physical entities combine in a variety of ways according to the laws of chemistry, which impose another constraint upon the physical elements but at the same time make possible the emergence of more complex chemical entities. The next level constitutes an enormous ontological leap: the emergence of a biotic level. The physical and chemical levels are an essential foundation upon which the biotic level exists, but they cannot account for the biotic level, which is governed by the laws of biology. The laws of biology, Polanyi argues, impose boundary conditions which are left open by the laws of physics and chemistry. Moving on up the ontological levels, we come to animate existence, then sentience, and eventually to articulate intelligence. At each level we find increased constraint. For example, at the animate level, physical objects that are embodied within an animate being no longer act simply according to the laws of physics. They are constrained by chemical and biological bonds, and they now move as part of a coordinated unit. Note that they do not disobey laws of physics. They are still constrained by the laws of physics. Now, however, they are bound up in a larger unit that imposes additional constraints on their actions. But this larger, more complex unit also is an achievement, an ontological achievement with far greater power of meaningful action than that of simply its physical and chemical components acting according to the laws of physics and chemistry. For example, we find at the animate level intelligent action informed by purpose, action which cannot possibly be explained by physical or chemical laws. We even find action which cannot be explained by basic biological drives such as hunger, survival, or sex: actions that seem to comprise a purely mental level of existence, such as play or puzzle-solving which have no apparent purpose other than the mental pleasure they generate.

I have already mentioned the emergence of the biotic level--the biosphere--as an enormous ontological leap. The achievement of an articulate intelligence constitutes a similar ontological achievement, a new level of being that Polanyi, following the thought of Teilhard De Chardin, calls the noosphere. The noosphere is a distinctly human achievement, a mental and spiritual level of existence that has emerged from the biotic level of existence, created by the articulate intelligence of individual human beings over the history of the species. Just as the biosphere transcends the physical and chemical levels on which its existence depends, so the noosphere transcends the biosphere on which it depends. It is both creation and creator of the ongoing life of the mind. It is what Kenneth Burke might call "the great conversation." It is the achievement that we variously call culture, tradition, our history, our collective consciousness, and the like. And, as is true throughout the ontological levels, it cannot be accounted for simply by the rules and the phenomena at the levels below it.

An example may be useful here in illustrating the existence of ultrabiological levels. Consider a chess game. The chess pieces move according to certain specifiable, formal rules. Many of us know these rules. Yet, these rules do not explain the moves of, say, an Anatoly Karpov. In fact many of us who know these formal rules of chess very well are totally mystified by the moves of a Karpov or any other chess master. But another master watching the play can follow and anticipate the moves almost flawlessly. Why is this? Because of a convivial meeting of the minds, literally an indwelling in which a master chess player can mentally join the mind of a fellow master and see the heuristic strategy behind the moves. A Karpov does not disobey any of the formal rules for movement of chess pieces, but those rules cannot begin to explain what Karpov does in a chess game, any more than the laws of physics can explain life or biological laws can explain our mental existence.

One of the supreme errors of intellectual life in recent centuries, Polanyi argues, has been the objectivist assumption that everything could ultimately be explained by reducing it to its most basic, atomized components. The ultimate representation of this urge is the Laplacean ideal that asserts that we would be omniscient if, with a giant supercomputer, we could account for every atom in the universe and could know its speed and direction. Then, the argument goes, we could know not only the present but also, by extrapolation, both the past and the future. We would have universal knowledge. Suppose this were so, Polanyi replies. What would we in fact know? Of what use would our universal knowledge be? We would know about every atom in the universe, but our knowledge would be useless because it would be meaningless. We would know every atom of a rose, but we would know nothing about its color, its smell, its texture, any of its qualities that give it meaning.

Adult Learning and Reality: The Knower and the Known

If I look at the film of a thoracic X ray, I will see, given my level of sophistication, some ribs, a spine, a sternum, and perhaps the heart and lungs. It is hard to suppose what someone totally unfamiliar with the technology and use of X-ray photographs and also unfamiliar with basic human anatomy would see. But a radiologist would see a rich array of information that would be totally transparent to me, including subtle signs of health or pathology. Reality, Polanyi asserts, has an inexhaustible profundity. We may study an X-ray photograph in total ignorance and see virtually nothing. But as we learn more, we are able to see more, and that new vision leads in turn to still more meaningful learning. At each stage we build more satisfying, more meaningful integrations of the data before us.

Even richer examples of reality than these tangible objects are those intangible entities that transcend the biotic level and inhabit the noosphere: for example, human personalities and intellectual theories. Tangibility is not a prerequisite for reality. The noosphere is just as real as the biosphere from which it has emerged and just as real as the geosphere from which both emerged. Creations of the human mind--truth, justice, and beauty, for example--are no less real for not being explicable in biological terms than is life for being inexplicable in chemical terms.

Most people who subscribe to critical theory or to critical teaching or to critical learning would reject the objectivist reductionism of, say, a Laplace. Yet, as C. S. Lewis has argued, too critical a skepticism can itself create a reductionist tendency. And this ontological reductionism can do real, practical damage to adult learning. Consider first the character of the noosphere. Polanyi says, "[T]he emergent noosphere is wholly determined as that which we believe to be true and right; it is the external pole of our commitments, the service of which is our freedom" (Polanyi 1962, 404). The noosphere has no tangible existence. It is embodied in multitudinous cultural artifacts, but as a living, meaningful entity, it exists wholly in the mental realm. And because it is wholly mental it can be destroyed by a simple mental act: the dissolution of belief. If we insist on dissociating ourselves from our cultural values and specifying these entities of the noosphere in terms of entities, then we risk destroying our highest achievement, because these noetic elements cannot be so specified. And failing to specify them, we may be tempted to conclude that they do not exist.

But suppose that some--or even many--of these values are false values. Suppose that they emerge from personal self interest. Polanyi would answer that everything we are and do and become does indeed emerge from personal self-interest, even crass self-interest, just as life itself emerges from the laws of physics and chemistry. But having emerged, we are empowered to transcend this lower stratum, just as life is an achievement that transcends physics and chemistry. Furthermore, we do not have to accept the noosphere as it exists at this moment as perfectly, incorrigibly true in order to accept its reality. Indeed such a view would contradict Polanyi's very definition of reality as an entity which can always manifest itself in still unexpected ways. The noosphere is not itself an artifact. Rather, it is a dynamic, vital sphere of existence, and precisely because it is vital, it is changing and corrigible.

This understanding brings us back to the triadic structure of knowledge. Recall that there are three essential facets to knowledge: the knower as a seeking, meaning-making agent; the tacit knowledge in which the knower dwells; and the new integration of meaning toward which the knower strives. In the illustrations of tacit knowledge, I concentrated on tangible entities: the dots in the half-screen picture and the dowel used as a probe. But I also said at that point that the knower's tacit knowledge is vast and complex, comprising memories, values, beliefs, and so on. In other words, the element of tacit knowledge that gives us our uniquely human power of intellect is precisely that element which we derive from the noosphere. The clues that we have to reality may be blurred or flawed; the noosphere is not perfect, nor will it ever be. But it is all we have. To reject it in a search for perfect, critically specifiable truth is like erasing the dots in the half-screen in an effort to find a better picture.

Therefore, if we embrace critical teaching as a methodology and critical thinking as a goal, as I believe we must do, it is supremely important that we examine critically the assumptions behind critical pedagogy and recognize their limits as revealed by a Polanyian epistemological and ontological analysis. We need to see the central importance of Stephen Brookfield's admonition: "A common misconception about critical thinking is that it precludes commitment to any ideas, actions, or purposes. . . . In fact, the opposite is true. As critical thinkers we can [Polanyi would say we _must_] still hold passionately to certain beliefs, actions, and causes. . . . Our commitment is informed and rational, balanced by a recognition of its possible falsity" (23).

As critical thinkers and teachers, then, we need to engage in a learning process that is truly dialectical. We need, in Peter Elbow's words (1986), to play both the doubting game and the believing game.

A list of references is available from the author.

Knowledge and Learning in Adult Education

by

Peter Jarvis

Abstract: this paper explores the concept of knowledge and, coincidentally, ideology and relates them to different types of adult learning. The context of the relationship is initially adult education but, finally, it is broadened to that of the wider society.

Learning theory has been a major pre-occupation of writers in adult education through the years, as Merriam's (1987) review of the literature suggests. By contrast, the concept of knowledge has received little attention, except perhaps in the writing of Paterson (1979) and Mezirow's (1981) discussion on the work of Habermas.

Even so, it is necessary to understand fully the concept of knowledge in order to understand something of the complexity of the learning process. The aim of this paper, therefore, is to explore the concept of knowledge and then to examine some recent research into adult learning in order to show that a more sophisticated understanding of knowledge may be related to an understanding of adult learning. The paper, therefore, falls into three distinct sections: the first examines philosophically the concept of knowledge; the second records a sociological research project into adult learning; the third seeks to draw the two together and to show how they interrelate in adult education. Finally, there is a brief concluding discussion.

The Concept of Knowledge

At the outset of this brief discussion it is necessary to indicate the fact that knowledge, as opposed to ideology and belief, etc., is assumed here to have two major criteria: verifiability and meaningfulness. This idea is based upon the argument used by Ayer (1936 in 1971, p.7) when he wrote:

> ... a sentence had literal meaning if and only if the proposition it expressed was either analytic or empirically verifiable.

Ayer went on to argue that he was really only concerned with a weak form of verification 'since all propositions are subject to the test of further experience' (Ayer, 1971, p.13). What he was suggesting is that knowledge may not be immutable and it is therefore always subject to further test and this raises considerable issues about the manner in which knowledge is taught.

Scheffler (1965) argued that there are three conditions for knowledge and these relate very closedly to the points that Ayer made. He suggested that conditions of knowledge relate to different traditions in philosophy and that they are threefold: knowledge may be verified empirically, that is that phenomena are revealed through experience, and natural science is a basic model for this; knowledge might also be verified experimentally, and this stems from the pragmatic tradition; finally, there is the analytic or rational tradition in which the knowledge is gained from rational or logical argument from *a priori* propositions, and herein may be placed mathematical knowledge. Knowledge, therefore, can be verified by experience, experiment and logic.

There are certain similarities between this discussion and that of Habermas, which Mezirow (1981) first brought to the attention of many in adult education, although Habermas does come from a different philosophical tradition, but he (1972, p.308 ff.) argues that there are three processes of inquiry:

> The approach of the empirical-analytic sciences incorporates a technical cognitive interest; that of the historical-hermeneutic sciences incorporates a practical one; and the approach of the critically oriented sciences incorporates the emancipatory cognitive interest that ... was at the root of traditional theories.

Habermas is suggesting in his first type that meaningful knowledge is derived and verified through observation and experimentation, and in his second form that it is derived from interpretation of empirical fact in order to disclose historical reality. In these two, Habermas is clearly in accord with the foregoing discussion but it is in his final form that he has raised considerable interest, since it is here that he discusses emancipatory knowledge. It is perhaps important to explain that where Habermas is referring to the 'traditional theories' in the above quotation, he had earlier argued that it was traditionally believed that the only knowledge that could free the individual from human interests in order to act was that which was based upon ideas. Here he is suggesting that the opposite is actually true and it is through human interest and through self-reflection that knowledge and interest are one. Clearly, this does not fit with the earlier analysis of knowledge as being both verifiable and meaningful. Indeed, Habermas claims that criticality can be verified by self reflection, because the individual 'is released from dependence upon hypostatized powers' (Habermas, 1972, p.310). He then goes on to argue, not very convincingly that knowledge and interest are identical. However, it might be possible to argue that critical reflection might be a form of rational knowledge or that it might lead to hypotheses that require verification, or even that the process of self-reflection is in the mode of Ayer's dictum that all knowledge should be subject to the test of further experience. But it is much more difficult to argue that critical self-reflection in itself is always a method of verifying knowledge. That there can actually be the form of emancipation that Habermas seeks is perhaps also doubtful. Mezirow (1981, p.4) rightly pointed out that since there are different domains of inquiry in Habermas' thought, there might also be 'different modes of personal learning and different learning needs'.

The Learning Processes

In order to understand the adults' learning processes more fully a multi-stage method was devised by which subjects could relate their own experiences of learning to a theoretical perspective. This method is described briefly here, but it has been fully documented elsewhere (Jarvis, 1987). The idea underlying this research was to get individual adults to relate their learning experiences to each other and to a wider theoretical perspective. Initially every member of a group was asked to write down any learning experience that they could recall. The individuals were then paired and asked to explore the similarities and differences of the experiences that they had recorded. Thereafter, the pairs were put into fours and asked discuss their four experiences. By this time, each group was discussing learning in a more theoretical manner, comparing and contrasting their individual experiences. Having reached this stage, the first time this process was undertaken, the groups were then given a simplified version of Kolb's (1984) learning cycle and asked to modify it to incorporate all their own experiences. On subsequent occasions the groups were given the modification of the cycle that had emerged as a result of all the previous discussions and asked to modify that. This process was enacted nine times in Britain and in America with different groups of adults and each time the modification was adapted to incorporate the learning experience recorded by all members of the group. In all, some two hundred people participated in the process and finally a model of the adults' learning processes was completed that reflected all the learning experiences that they recorded and discussed. This model was then tested in subsequent seminars with approximately another three hundred people, in Britain, America and Denmark, so that it is known to related to a wide variety of learning experiences.

The following table outlines each of the types of learning discovered:

Table 1 An Analysis of Learning

Category of Learning	Type of Learning
Non-Learning	Presumption Non Consideration Rejection
Non-reflective Learning	Pre-conscious Skills Memorisation
* Reflective Learning	Contemplation Reflective Skills Experimental-Knowledge

* (Each of the reflective forms of learning can have two different outcomes, conformity or change.)

It may be seen from the above table that there were basically nine types of learning discovered in this research, three of which are non-reflective and the other six are reflective, although these latter do not all have to be innovative or emancipatory in nature.

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Knowledge and Learning in Adult Education

In adult education there has always been some doubt about the idea that even in the didactic approach to teaching, educators actually transmit knowledge. Indeed, teachers actually encode their knowledge into symbols of information which, upon receipt, learners decode and process so that when they have given mearning to it they begin to create new knowledge. However, teachers can also encode their belief propositions into symbols of information which, upon receipt, learners also decode and seek to give meaning to it. Hence, learners always receive symbols that contain information and it is this information that has to be treated critically in order to determine whether it contains belief propositions or truth propositions or a mixture of the two.

Both belief and truth propositions may have mearning, that is be understandable, to the recipients but for that information to become knowledge it need not only have meaning but it must be verifiable. However, it is not always possible for learners to verify everything that they receive, and so it is necessary to examine this process in a little more detail. Having received information and understood it, it is not always possible for learners to verify everything that they are taught and so they have to take much of the information that they receive on trust. Therefore, if teachers do present information as if it is the basis of verifiable knowledge then certain duties are laid upon them to be sure of what they teach. Ayer (1956, p.35) wrote that 'the necessary and sufficient conditions for knowing that something is the case are first that what one is said to know be true, secondly that one be sure of it, and thirdly that one should have the right to be sure'. Teachers have to earn that trust by being sure that what they teach actually has the foundations for knowledge. However, trust is not without its problems since when it occurs, then there is a danger that it will produce a situation where non-reflective learning actually ensues - because learners actually trust the teacher! Teachers, therefore, do have the duty of encouraging students wherever possible to verify the knowledge that they gain in the teaching and learning process. Teachers might also devise teaching methods which enables this to occur during the actual process of teaching and learning. Empirical knowledge, for instance, might be learned through experiential methods, pragmatic knowledge might be learned through experimentation and problem solving approaches and rational-logical knowledge might be learned through argumentation. Each of these approaches actually entails a form of reflective learning. But it will be recalled that the outcome of reflective learning is not always innovative - it is more frequently conformist.

But teachers, by virtue of their position as teachers of a subject and as employees in the organisation do not really have the same status as the learners and this has its own potential problems. If they present their information, whether it be the basis of truth or belief propositions, in an authoritarian manner, then learners may receive it, decode it and perhaps understand it but not seek to verify it because of the way in which it has been presented. Indeed, they may not even be critical if it and so they may learn it in a non-reflective manner, e.g. memorisation. A lower form of learning has occurred but it does not necessarily mean that a form of knowledge has been created since the verification process - that this is true knowledge because the teachers have taught it - is an unacceptable one for it gives educators a relationship to knowledge that they simply do not have. However, learners might actually treat the information that they have received as having truth propositions rather than belief propositions and this is one of the dangers of non-reflective learning.

What then of those propositions which are not verifiable? How should they be treated? From the outset it has to be recognised that as hypothesis, ideology, or belief they should not be accorded the status of knowledge and should not be treated as if they were. This does not mean that they are not important - they may be very important indeed. That they should not be neglected within the educational process is one major reason why education is not defined here only in terms of knowledge content. It is at this point that the critical debate about ideaology, world views and some of the social sciences, etc. assumes significance. It is here, however, that there are no truth propositions, only belief propositions, and consequently no correct answers. Hence, another danger emerges, that in a world of relativism the ideology of those in authority dominates.

Whilst this is valid for the teaching and learning situation including the references to the authority of the teacher, it might be viewed as no more than a microcosm of the wider society. Society is an information society, the mass media are continually presenting information and this needs to be treated in the same way as it does when the teacher presents it. Thinking critically is important in the contemporary world, all information that is presented to people needs to be processed by them and verification sought where appropriate (Jarvis, 1985) but now the authority of the teacher can be turned into the power relations of society and critical thought may be regarded as a more dangerous occupation, especially when it is the belief propositions of the powerful which are subjected to scrutiny.

Conclusions

Trying to distinguish between knowledge and ideology is perhaps an impossible undertaking (McLellan, 1986) and it has certainly not been achieved here. However, from within a limited theoretical framework a number of conclusions emerge that require further consideration:

- That the content of the educational process, e.g. the information, needs further consideration,
- That a philosophy of teaching adults needs to be more fully developed,
- That adult education needs to explore the relationship between knowledge and ideology and relate it to a conception of education,
- That learning needs to be contextualised and that the relationship between types of learning and the social context needs more discussion,
- That the educational process needs always to be analysed within the framework of the wider society.

This paper has endeavoured to draw links between knowledge, ideology and learning within adult education; it has raised some quite fundamental questions about the nature of the educational process and it has pointed to other areas that require consideration.

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As the Gavel Strikes: Legal Issues Related to Professional Competence and Mandatory Continuing Education

Mary Elaine Kiener, RN, PhD*

During the past decade, many state legislative bodies have expanded policies regarding professional competence to require continuing education as a measure of continued competence. This paper identifies and examines legal issues raised in litigation concerning professional competence and/or mandatory continuing education. The discussion can form the basis for policy review and revision.

Introduction

Competence. Concerns about mandatory continuing education, especially as it relates to professional competence have fueled hot debates among adult educators and professionals alike for several decades. The issues involved are complex, in part because they reflect societal as well as professional concerns.

Legislative bodies have frequently established policies ensuring initial professional competence to protect the public's health, safety and welfare. These policies most often take the form of licensure requirements for lawful entry into a profession. Today's age of consumerism has generated increased public concern regarding the quality of services provided by professionals in all fields. As a result, within the last decade, many state legislatures have expanded licensure policies for professional groups to require participation in continuing education for relicensure.

Mandatory Continuing Education. Many professionals oppose mandatory continuing education requirements. While most recognize their value and accept the necessity of staying abreast of new developments in their field, a few professionals have initiated legal challenges to these mandates (Lisman, 1980; Ohliger, 1983; Phillips, 1983). The mandates have been upheld in most cases; in two, however, the continuing education requirements were determined to be constitutionally invalid (Phillips, 1983).

Since "litigation often does not initiate an issue but reflects issues and trends in society" (Levin, 1977, p.6), a review of the litigation related to professional competence and mandatory continuing education may facilitate understanding of both societal and professional concerns. Beginning with a brief description of litigation ajudicated in the state and federal courts concerning matters of mandatory continuing education, this paper provides a discussion of the legal issues related to professional competence and mandatory continuing education. The overall goal of the paper is to offer professionals a stimulus and basis for further examination of existing policies regarding mandatory continuing education requirements and alternative measures for assessing professional competence.

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*Michigan State University, College of Nursing, Division of Lifelong Education, A-230 Life Sciences Building, East Lansing, MI 48824

Review of Specific Cases

As early as 1889, the United States Supreme Court upheld the right of states to require a minimum standard of educational achievement in order for an individual to become a licensed physician (*Dent v. State of Virginia*). While this case directly concerned requirements for initial licensure, a portion of the court's opinion also supported the need for continuing education and has been cited in at least one case in which the constitutionality of a mandatory continuing education requirement has been questioned (*Week v. Wisconsin State Board of Examiners in Chiropractic*, 1947).

Gamble v. Board of Osteopathic Examiners of California (1942) was one of the first legal challenges to professional continuing education requirements. In this case, the California Supreme Court rejected the plaintiff's argument that the Osteopathic Board's requirements were discriminatory and therefore unconstitutional, since the Board of Medical Examiners did not require continuing education for relicensure.

In 1947, in addition to upholding the basic constitutionality of continuing education requirements in *Week v. Wisconsin State Board of Examiners in Chiropractic*, the Wisconsin Supreme Court also ruled that while the State Legislature "has the right to decide whether advancements in (a) profession require those engaged in its practice to attend educational programs in order to continue practicing" it may not mandate a particular program or program provider. Using similar reasoning, two other State Supreme Courts ruled that continuing education requirements were invalid (*Podiatry Society of the State of New York v. Regents of the University of the State of New York*, 1974; *State Board of Chiropractic Examiners v. Life Fellowship of Pennsylvania*, 1971).

Harrah Independent School District v. Martin (1979) represents the only United States Supreme Court ruling to date which is related to mandatory continuing education. In this case, the court ruled that a public school teacher's firing for failing to meet mandatory continuing education requirements did not deprive her of substantive due process or equal protection.

More recently, Robert J. Verner, a Colorado attorney suspended from practice of law due to his failure to comply with mandatory continuing legal education requirements, was denied a hearing by the United States Supreme Court (*Verner v. State of Colorado*, 1984). Both the District Court and the Circuit Court of Appeals had upheld the constitutionality of the continuing legal education requirements (*Verner v. State of Colorado*, 1982, 1983), based on legal precedent supporting the authority to prescribe minimum levels of legal competency (*Schware v. Board of Bar Examiners of the State of New Mexico*, 1957).

Discussion of Relevant Legal Issues

States' Rights. One of the most fundamental legal issues related to professional competence and mandatory continuing education is the state's role in the process of establishing regulations and assuring minimum levels of compliance with set standards. The courts have traditionally upheld the rights of individual states to pass regulations intended to provide for the general welfare of their people. For example, beginning with Dent v. State of Virginia (1889), the court has upheld the right of the state to mandate minimal standards of educational achievement for licensure as a physician.

Administrative Autonomy. A number of courts have extended states' rights to allow the delegation of the legislature's authority to administrative officers or boards (Day-Brite Lighting, Inc. v. State of Missouri, 1952; Harris v. State Board of Optometrical Examiners, 1926; Heifner v. Board of Education of Morris Community High School District #101, Grundy County, IL, 1975; Jersey Maid Milk Products Co., Inc. v. Brock, 1939; Podiatry Society of the State of New York v. Regents of the University of the State of New York, 1974; Ray v. Parker, 1940; State Board of Chiropractic Examiners v. Life Fellowship of Pennsylvania, 1971). Beyond the initial delegation of authority, several decisions have allowed duly appointed administrative agencies great discretion provided that they do not overstep their bounds (Board of School Trustees, School City of Peru v. Moore, 1941; Huls v. Arizona State Board of Osteopathic Examiners in Medicine and Surgery, 1976; Hunt v. State Board of Chiropractic Examiners, 1948; Massachusetts Nurses Association v. Board of Registration in Nursing, 1984).

Traditionally, courts in the Pacific region have maintained a strong policy of non-interference in matters concerning administrative autonomy, based on the Ray v. Parker (1940) precedent which stated, "Courts should let administrative boards and officers work out their problems with as little judicial interference as possible" (Bess v. Park, 1956; Pitts v. Perluss, 1962; Ralph's Grocery Co. v. Reimel, 1968; Rible v. Hughes, 1944). This regional tradition of non-interference has also been accepted on a national basis (Day-Brite Lighting Inc. v. State of Missouri, 1952).

Rational connection/job relatedness. The issue of rational connection, relevance or job relatedness has become a particularly complex area of concern, especially subsequent to the passage of the Civil Rights Act in 1964. In earlier decisions, beginning with Dent v. West Virginia (1889), the U.S. Supreme Court stipulated that qualifications for licensure must have a "rational connection with the applicant's fitness or capacity to practice" (Schware v. Board of Bar Examiners of the State of New Mexico, 1957).

Legal challenges linked to job relatedness or employment discrimination issues, based on either the Due Process Clause of the 5th Amendment or the Equal Protection Clause of the 14th Amendment, required the Plaintiff to show an intent to discriminate, as well as a specific act of discrimination (Baker v. Columbus, 1971; Harrah Independent School District v. Martin, 1979; Kelley v. Johnson, 1976). Enactment of the Civil Rights Act of 1964, however, added a new dimension by striving to achieve equality of employment opportunities for all individuals.

Answering a landmark appeal to the Civil Rights Act in Griggs v. Duke Power Company (1971), the United States Supreme Court ruled that "if an employment practice which operates to exclude Negroes cannot be shown to be related to job performance, the practice is prohibited." In that same year, the Fourth Circuit Court of Appeals offered a similar interpretation of the Civil Rights Act: "The applicable test....is whether there exists an overriding legitimate business purpose such that the practice is necessary to the safe and efficient operation of the business" (Robinson v. Lorillard Corp., 1971). According to Holley and Feild, instead of having to show "an intent to discriminate,"

> Under Title VII...the complainant has the initial burden of presenting evidence that a specific act of discrimination has occurred....The burden of proof is then shifted to the employer who must articulate legitimate, rational, and non-discriminatory reasons for any employment disparity. (1977, pp. 428-430)

While job-relatedness continues to be an important issue in appeals under Title VII, there seems to be some confusion within the courts as to when it actually becomes an issue. For example, in two cases concerning the use of scores on a national teacher's examination for teacher selection (Armstead v. Starkville Municipal Separate School District, 1972; Baker v. Columbus Municipal Separate School District, 1971), the courts declared the practice to be illegal. However, in the Armstead case, a major part of the court's decision was based on the assertion that the test violated equal protection simply because it was not designed for the purpose for which it was being used. Yet, in Cooper v. Allen (1972), the courts asserted that job relatedness need only be substantitated following a demonstration of discriminatory effect.

Because of the difficulties within the courts, as well as the public and private sectors, in interpreting Title VII, Huff (1974, p. 249) predicted that

> Judges may be less disposed to strike down diploma and degree requirements, despite the lack of a strong showing of their job-relatedness, when the public interest or safety are at stake, and when there are few alternatives for acquiring and evaluating competencies.

Professional Growth. Although the concept of mandatory continuing education requirements has precipitated relatively few legal challenges, the issue of professional growth has been raised and upheld in several relevant decisions (Heifner v. Board of Education, 1975; Last v. Board of Education of Community Unit School District #321, Winnebago & Stephenson Counties, 1962; Richards v. Board of Education of Township High School District No. 201, 1960). While a specific definition for professional growth has sometimes suffered due to its "well-recognized meaning" (Richards v. Board of Education, 1960), beginning in 1891 with Cook v. State, the courts throughout the years have defined education very broadly, both in permissible topics and means of acquisition (Jones v. Better Business Bureau of Oklahoma City, 1941; Rible v. Hughes, 1944; State v. Rowan, 1937; Weyl v. Commissioner of Internal Revenue, 1931).

Implications and Recommendations

Based on the previous examination of several fundamental legal issues related to mandatory continuing education, a few predictions of judicial thinking can be offered. First, states--because of their concern with the public welfare--have a rather well protected right to demand completion of specified activities by an individual to continue within a certain professional role.

Typically, activities related to professional growth or continued education have been upheld. However, especially given the courts' liberal descriptions of these concepts, it is quite difficult to directly identify the linkages between acquisition of knowledge (education), competence and subsequent performance. Therefore, while mandatory continuing education requirements--especially if the educational alternatives are broadly defined and non-discriminatory in nature--would tend to be upheld by the courts, in reality, they can offer little concrete reassurance of achieving the state's ultimate goal: protection of the public welfare.

On the other hand, what would be the legal implications of a detoured focus towards a demonstration of increased competency, instead of mere attendance at a learning activity? Most likely, such an approach would involve, in one form or another, utilization of a performance evaluation measure. However, such measures would be closely tied to the controversial "job-relatedness" issue.

> Courts appear to be using the (Equal Employment Opportunity Commission) Guidelines in hearing cases involving employee appraisals....Since many formal performance evaluation systems rely on some form of a formalized measure of employees' job performance...and since these measures are used for personnel decision-making, it is reasonable to conclude that...administrators must design their performance evaluation systems to be in compliance with the EEOC Guidelines. Moreover, any system that is designed must be administered in a non-discriminatory manner. (Holley & Feild, 1977, p. 431-432)

Aside from the job-relatedness and non-discrimination concerns with this approach (admittedly a rather large aside), a competency-based performance evaluation policy might appear to be a legally compatible solution to the concern for insuring professional accountability. Its legality, however, does not necessarily insure its desirability. As critics of the competency-based education movement often indicate, such an approach tends, by necessity, to divide the task or occupation being measured into such miniscule segments as to render them practically useless.

Summary

This paper has offered a legal perspective to ongoing discussions related to professional competence and mandatory continuing education. Its purpose, while providing a review of pertinent litigation and examination of relevant legal issues, has not been to advocate ajudicatory solutions to ongoing professional and societal concerns. On the other hand, the discussion should provide insight to professional groups as they strive to improve mechanisms for determining and assuring continued professional competence and performance.

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(available upon request)

The Further Development of an Adult Classroom Environment Scale

Michael Langenbach, University of Oklahoma
Lola Aagaard, University of Oklahoma

ABSTRACT

A revised version of Darkenwald and Valentine's Adult Classroom Environment Scale (1986) was administered to 287 adult students from a variety of settings. A factor analysis confirmed the stability of a five factor solution found earlier (Aagaard and Langenbach, 1987). The 34 item scale appears to be both reliable (.90) and a valid measure of adult classroom environments.

Statement of the Problem

An adult classroom environment scale was developed by Darkenwald and Valentine (1986) by inductively divining seven dimensions, each made up of seven items, all of which purported to measure the environment of adult classrooms. The seven dimensions were: "Teacher Support", "Organization and Clarity", "Affiliation", "Involvement", "Task Orientation", "Personal Goal Attainment", and "Student Influence". A wide variety of settings and age ranges were included in their systematic data collection, but no factor analysis was conducted. Subsequently, the scale was administered to a sample of adults similar to the original sample and a factor analysis was performed to determine whether or not the original seven dimensions would be supported (Aagaard and Langenbach, 1987).

Darkenwald and Valentine's dimensions were only partially supported by the 1987 analysis because the most readily interpretable solution included five factors, not seven, and 15 items did not load clearly on any factor. The present study examined the factor stability of a revised form of the scale.

Methodology

The fifteen non-loading items from the original 49 were deleted in the revised form of the scale that was administered to 290 adult students from a variety of education and training settings. Information regarding the age, gender and educational level of the subjects was also collected. Three protocols were incomplete and therefore unusable.

A maximum likelihood factor analysis was performed on the 34 items, using the squared multiple correlations of each item with all other items as the prior communality estimates. Orthogonal solutions with three to eight factors were evaluated for clarity of theoretical interpretation.

Description of the Data

Data were collected from five different educational settings:

1) Graduate classes in education from a comprehensive state university, n=115
2) Non-traditional, graduate level, liberal arts program, n=24
3) Undergraduate classes in radiologic technology, n=22
4) Government service technical training classes, n=102
5) Adult basic education classes, n=24

Table 1 contains the comparison of the three samples of respondents.

For both factor analyses the criteria used to determine whether or not an item loaded clearly were: a loading of .39 or higher on one factor, with no loadings within .10 on the other factors; and no loadings higher than .40 on any other factors.

Table 1

Sample Comparisons on Age, Gender, and Educational Attainment

Age	Original 1986	F.A. - 1 1987	F.A. - 2 1988
26	32.3%	32.1%	28.0%
26 - 33	32.8%	27.7%	24.6%
34 - 72	34.9%* * (3.3% of this group were above age 56.)	40.3%* * (1.2% of this group were above age 56.)	47.3%* *(1.1% of this group were above age 56.)
Gender			
Male	39.3%	50.3%	54.4%
Female	60.7%	49.7%	45.6%
Education			
No credential	3.8%	0.5%	6.3%
High school diploma	46.8%	44.0%	27.5%
Associate degree	8.9%	14.4%	12.3%
Bachelor's degree	31.4%	22.5%	28.9%
Graduate degree	9.1%	18.6%	25.0%

First Factor Analysis, 1987

The first factor contained 13 items and was called "Teacher Activities" because it encompassed all but three items of Darkenwald and Valentine's (1986) dimensions of "Teacher Support" and "Organization and Clarity." The "Teacher Support" dimension contained items such as:

"The teacher makes every effort to help students succeed."

"The teacher encourages students to do their best."

The "Organization and Clarity" dimension included items such as:

"The teacher comes to class prepared."

"The subject matter is adequately covered."

The second factor contained six items. Because this factor exactly paralleled Darkenwald and Valentine's (1986) dimension of "Affiliation," it was labeled "Student Affiliation." This factor contained items such as:

"The students in the class work well together."

"Many friendships develop in the class."

Factor three contained six items and included the items from the "Involvement" dimension which related to student enjoyment of the class, along with the items from "Task Orientation" concerning whether or not the teacher and students discuss things unrelated to course content, and one item from "Personal Goal Attainment" on the relevancy of the class to the lives of the students. Consequently, this factor was difficult to name, but was tentatively labelled "Student Attitudes."

The fourth factor contained five items very clearly related to teacher domination of the class, and thus the factor was called "Teacher Domination." Four of these items were from the dimension of "Student Influence" and one item was from "Personal Goal Attainment."

The final factor contained four items, and was labeled "Student Prerogative" because the items dealt with what the students want to learn, learning at their own pace, and student participation in setting the course objectives, topics and requirements. The dimensions of "Personal Goal Attainment" and "Student Influence" were both partially represented in this factor.

Second Factor Analysis, 1988

The second factor analysis involved the revised scale, which included only the 34 items that loaded well in the 1987 study. Of the orthogonal solutions examined, the six-factor structure was clearly the most interpretable. Table 2 contains the items and their factor loadings. (See table 2).

The "Teacher Activities", "Student Affiliation", "Teacher Domination", and "Student Prerogative" factors were reproduced nearly item-for-item in the second analysis. One item from "Student Affiliation" and one from "Teacher Domination" failed to load.

The remaining factor, "Student Attitudes", did not maintain its integrity. The two items dealing with teacher and student discussion of unrelated topics split off to form a new factor, and one item failed to load. This left three items on the factor we continue to call "Student Attitudes". Table 3 contains the factors and the text of their respective items.

The three items which did not load were:

8 -- The teacher makes all the decisions in the class.
13 -- Students often share their personal experiences during class.
15 -- Most students look forward to the class.

Table 2
Items and Factor Loadings

Factor 1		Factor 2		Factor 3		Factor 4		Factor 5		Factor 6	
"Teacher Activities"		"Student Affiliation"		"Student Prerogative"		"Teacher Domination"		"Student Attitudes"		"Unrelated Discussion"	
2	.44	6	.48*	1	.54*	10	.41	3	.59*	4	.59*
7	.64*	22	.49	24	.62*	20	.69*	5	.49*	14	.68*
11	.60*	23	.79*	25	.66*	27	.46*	9	.52*		
12	.46	31	.45	30	.52*	34	.48*				
16	.71*	32	.62*								
17	.64*										
18	.72*										
19	.63*										
21	.59*										
26	.51										
28	.48*										
29	.64*										
33	.48										

(Items with asterisks following their loadings also achieved final communality estimates of at least .35.)

Table 3
Factors and Text of Items

Factor 1 -- "Teacher Activities"

2. Teacher comes to class prepared.
7. Learning objectives are made clear at the start of the course.
11. The teacher makes every effort to help students succeed.
12. Students rarely meet assignment deadlines. (Reverse Scored)
16. The class is well organized.
17. The teacher encourages students to do their best.
18. The class has a clear sense of direction.
19. The subject is adequately covered.
21. Students do not know what is expected of them. (Reverse Scored)
26. The class is more a social hour than a place to learn. (Reverse Scored)
28. The teacher respects students as individuals.
29. Learning activities follow a logical sequence.
33. The teacher cares whether or not the students learn.

Factor 2 -- "Student Affiliation"

6. The students in the class work well together.
22. The students in the class often learn from one another.
23. The students in the class enjoy working together.
31. Students in the class feel free to disagree with one another.
32. Many friendships develop in the class.

Factor 3 -- "Student Prerogative"

1. Students help to decide the topics to be covered in the class.
24. The teacher tries to find out what individual students want to learn.
25. Students participate in setting course objectives.
30. Students have the opportunity to learn at their own pace.

Factor 4 -- "Teacher Domination"

10. The teacher expects every student to learn the exact same things. (Reverse Scored)
20. The teacher sticks to the lesson plan regardless of student interest. (Reverse Scored)
27. The teacher dominates classroom discussion. (Reverse Scored)
34. The teacher insists that you do things his or her way. (Reverse Scored)

Factor 5 -- "Student Attitudes"

3. Students are often bored in the class. (Reverse Scored)
5. Many students think that the class is not relevant to their lives. (Reverse Scored)
9. Most students enjoy the class.

Factor 6 -- "Unrelated Discussion"

4. The teacher often talks about things not related to the course. (Reverse Scored)
14. Students often discuss things not related to course content. (Reverse Scored)

Reliability for the total revised scale was .90. Reliabilities for the individual factors were as follows:

"Teacher Activities" -- .89
"Student Affiliation" -- .74
"Student Prerogative" -- .72
"Teacher Domination" -- .69
"Student Attitudes" -- .68
"Unrelated Discussion" -- .34

Conclusion

The Revised Adult Classroom Environment Scale appears to have five reliable factors, with the possibility of a sixth. Currently, the sixth factor has only two items and therefore has low reliability. The next revision of the scale might eliminate the three non-loading items and add a few additional items to reinforce the weak factor. If the six-factor structure is supported in such a revision, then educators interested in adult classroom research would have available a reliable instrument based on empirically supported constructs.

ADULT EDUCATION, MCCARTHYISM AND THE COLD WAR.

Michael Law
University of Waikato, New Zealand

ABSTRACT

Although ignored by adult education histories, McCarthyism had a major impact on the field. Professionalization and the emergence of graduate programs have to be interpreted against this backdrop.

INTRODUCTION

During the 1950s, McCarthyism cast a long shadow over the United States and beyond. Yet the histories of adult education are almost completely silent with respect to this phenomenon. Instead, the decade is celebrated as the era during which adult education came of age. The dominant theme is that of 'professionalization', a notion that is inextricably linked to the emergence of graduate programs. Nowhere are these developments located within the context of McCarthyism. The research reported in this paper sought to 'rediscover' this lost, neglected, sanitized facet of American adult education's social history. This paper offers a revisionist interpretation of adult education in the 1950s with special emphasis on adult education's engagement with McCarthyism and the longer term implications of this phenomenon on the field.

THEORETICAL OBSERVATIONS

Two sets of theoretical observations informed this study. The first holds that McCarthyism was not a passing aberration, but that it tapped a fear of radicalism that is deeply ingrained in American political culture (Griffith, 1970). A line of continuity can be traced from the reaction to emerging labour in the latter part of the nineteenth century through to the reaction to the civil rights movement and subsequent social protest. This fear is a pivot around which more than McCarthyism hinges. The second set of theoretical observations holds that this fear is also present in the liberal tradition. Within liberalism there is an ongoing tension between the democratic impulse and a more conservative distrust of popular politics (Gamble, 1981): a fear that without "culture" there will be "anarchy" (Williams, 1980).

The social philosophy of liberal adult education can be read as a manifestation of this tension. A theoretical cornerstone is a belief in the capacity of the democratic state to serve as an agent of reform. This alternative to a more transformationist radicalism appeals to both moderate to mildly radical reformists and more conservative, but nevertheless pragmatic, classical liberals. Both the British W.E.A.-Oxford alliance and the panel of advisors assembled by the Carnegie Corporation's Frederick Keppel in the 1920s can be seen as single clusters of liberals sharing bourgeois values and a common class location (Law, 1988).

METHOD

The research approach adopted was that of interpretive historical inquiry informed by the theoretical considerations summarized above. The researcher reviewed the social philosophy of American adult education from the mid-1930s to the late 1950s in order to identify discontinuities that might be attributable to McCarthyism. This was followed by a detailed study of primary and secondary documents from the late 1940s and 1950s. In general, secondary sources provided the overview of the social context of McCarthyism; primary, published documents, principally the two AEA journals, *Adult Leadership* and *Adult Education*, and reports of congressional investigations, provided the basis for examing adult education's *public* engagement of McCarthyism.

FINDINGS AND DISCUSSION

Prelude to McCarthyism

The immediate origins of McCarthyism date from the 1930s: America's 'red decade'. This was a time of labor militancy and widespread social ferment. Against the backdrop of the depression, progressive education took a sharp radical turn (Bowers, 1969); this provoked a conservative backlash which in some states resulted in witch hunts, loyalty oaths and the suspension of teachers. Roosevelt's election and the inauguration of the 'New Deal' diffused some of the intensity of popular politics; but to the conservative right, the New Deal simply evidenced the degree to which socialists and others had penetrated the federal government. This sentiment resulted in the creation of the Dies Committee in 1938, which institutionalized the congressional drive against "un-American activities" and introduced some of the guilt by association techniques later employed by McCarthy and his associates (Griffith, 1970).

The American Association of Adult Education (AAAE) was the product of Keppel's efforts to fashion a pluralistic, liberal alliance in order to both promote *and* contain a growing field of practice within the boundaries of established educational traditions (Law, 1988). The AAAE entered the 1930s with a mildly collectivist social philosophy that became more pronounced as the country radicalized. Articles in the *Journal of Adult Education* generally welcomed the New Deal, even if with some reservations. There was a close symmetry between the Association's domestic social philosophy and its internationalism; the AAAE forged close links with, and facilitated Carnegie support for, similar liberal adult education movements in other countries. The Association's leadership was not receptive, however, to radical education. In 1934 and 1935, Morse Cartwright delivered two stinging attacks on the radicals. He argued that in deserting "the philosophy of open-mindness in education", the "former liberals" had lent "considerable color to the conservative's suspicions of any and all dissenters" (1934, p. 345).

The Association emerged from World War II with its social philosophy largely intact. The promotion of world understanding was a recurring theme in the literature and at conferences; the Association was particularly supportive of Unesco. At the 1948 AAAE conference Robert Blakely called for international control of atomic energy and the sharing of scientific secrets; another keynote speaker emphasized the importance of black civil rights. At the same time, there was a recognition in the *Adult Education Journal* that America was moving in a different direction. International events -the Soviet atomic explosion, the defeat of the Nationalist regime in China, the Berlin blockade- coupled with domestic issues fuelled conservative pressure on Truman for an ever tougher stand against "subversives". In 1948 the *AEJ* reported Abbott Kaplan's call for resistance to the "pressure for conformity" and for the defence of "the right of people in our communities to express unpopular views and to participate in activities of a social, political or economic character" (7, 3, p. 105). The next year Robertson Sillars was critical of the superficiality of adult education programs about international understanding and their failure to "evaluate the shibboleths of the 'cold war'" (*AEJ 8*, 2, p. 92).

Kaplan's plea reflected widespread liberal unease at trends in the political culture. This concern was captured by a report for the Ford Foundation which identified "five areas of action" that emphasized the promotion of peace, the strengthening of the economy and democracy and the role of education in the pursuit of these goals (Reeves, 1969). In early 1951 Paul Hoffman, a liberal Republican, took up his duties as the new president of the Ford Foundation. His principal associate was Robert Hutchins, a prominant educator with an established interest in adult education. Both were already public critics of McCarthy; the establishment of the Hutchins Fund for Adult Education (FAE) was one of their first moves to underpin fading liberal values (Reeves, 1969).

Adult education during the McCarthy years

McCarthy dominated the political landscape from early 1950 to the latter half of 1954. During that period, traditional institutions seemed powerless; in Congress, liberal politicians collapsed under the pressure, especially after the 1950 mid-term elections (Griffith, 1970; Fried, 1976). For a while, adult education's voice was also muffled; themes addressed in the late 1940s were now pursued with less vigour in the literature. This was partially attributable to the transition from AAAE to the more broadly based AEA. The new Association received generous funding from the FAE which also sponsored the creation of the Center for the Study of Liberal Education for Adults (CSLEA). With this support, the AEA launched a new practitioner journal, *Adult Leadership*, in 1952. By this time, the political atmosphere was tense. Liberal intent was demonstrated by the adoption of the promotion of 'democratic leadership' as the organizing theme of the new journal, but the contours of the concept remained vague and in the journal itself a degree of editorial circumspection was evident. An observation in the October issue that "such opposition to teaching about the United Nations and Unesco ... is founded on misinformation, fear and prejudice" earned a sharp rebuke from a correspondent. In a cautious response, Malcolm Knowles stated that "Adult Leadership, itself has no stated policy for or against the United Nations or Unesco" (*AL 1*, 8). A few issues later, in an interview with Paul Douglas, both Knowles and the liberal senator, managed to gingerly skirt controversial questions and to avoid any direct reference to McCarthy.

Meanwhile, Hoffman's and Hutchins' public opposition to McCarthy was resulting in problems for both the Ford Foundation and the Motor Company. Hoffman further enraged conservative Republicans by his leading role in the campaign to secure the GOP's presidential nomination for Eisenhower whom Hoffman described as an opponent of McCarthy "who would dispel the 'present atmosphere of fear and hate" (Fried, 1976, p. 223). In April 1952, the House of Representatives established the Cox Committee to investigate "subversion and Communist penetration" of philanthropic foundations (Nielson, 1972, p. 82); this was followed in August by William Fulton's attack on foundations in the *American Legion Magazine*. Faced with campaigns against company products and continuous critical publicity, Henry Ford II moved to redirect the Foundation and its wayward offspring. By early 1953, Hoffman had resigned and Hutchins was sidelined. However, this did not quell the conservative storm for just prior to these moves, Hoffman and Hutchins had created another semi-autonomous foundation, the Fund for the Republic, which, quite correctly, was perceived by both liberals and conservatives as a direct challenge to McCarthy (Reeves, 1969). In July 1953, another congressional investigation of tax-exempt foundations was launched. Its chairperson, conservative, senior Republican, B. Carroll Reece, foreshadowed the direction of the inquiry with a detailed attack on Hutchins.

Notwithstanding these developments, adult education was starting to find its voice. As early as 1951, the AEA had formed a social philosophy group led by Eleanor Coit and Eduard Lindeman, two people associated with the social commitment of the old AAAE. This group conducted a series of meetings around the country during 1952 and 1953. At its conference in late 1952, the AEA established a "Committee for the Preservation of Intellectual Freedom." A preamble to the report recommending this move observed that "individuals and groups may and do suffer an *unconscious* paralyzing influence and conscious fears which confuse our thinking, vitiate our moral courage, and ultimately destroy our effective work." (*AE 3*[1], p. 49). There was also a firming of the editorial line in *Adult Leadership* during 1953 with an issue dedicated to world affairs and Unesco and regular reports and articles in support of black civil rights. The publication in November of a workshop feature on controversial issues signalled a more forceful stand on McCarthyism itself. The introduction left no doubt as to what had prompted the feature: "strain, near-hysteria, compulsive conformity, and apparent distrust of institutions and an ideology which has served us so well for 150 years" (Wilson, 1953, p. 9). At the AEA conference, incoming president Paul Sheats, declared: "I yield to no man in my hatred of Communism .... But for this precise reason I cannot support under the cloak of anti-Communism, practices which seem to me to be clearly subverting our heritage of freedom" (p. 28).

This emboldened stance continued into 1954. In April, just three days after McCarthy's televised rebuttal of an expose by CBS broadcaster, Ed Murrow, Coolie Verner compared McCarthyism to fascism. Perceptively distinguishing the phenomenon from the person, Verner identified widespread support for "this kind of totalitarianism", the intimidation of legislators, the failure of educators and the longterm destruction of a "free intellectual climate" as the "most terrifying aspects of McCarthyism (which) go deeper that the present indignities reported in the press" (p. 3). In June, Kaplan returned to the lists with a hard hitting attack in *Adult Leadership* on loyalty oaths and McCarthyism; he also vigorously defended the stands taken by Hutchins and Murrow. But the most significant action was the decision in March to adopt "Adult education for a free society" as the theme for the annual conference and to invite another critic of McCarthy, the eminent historian, H. S. Commager, to deliver the keynote address.

McCarthy's immediate legacy

McCarthy himself began to self destruct around the middle of 1954, but by this stage, imitative investigations had developed a life of their own. McCarthyism had redefined the notions of 'loyalty' and 'dissent' and had legitimized both structures and techniques that were to be mobilized by those who, in Myles Horton's words, saw a red behind every black (Adams, 1975).

The Reece Committee was an example. Its targets were many. In part it sought to further discredit the social reformism of the 1930s; in part it was designed to intimidate foundations and agencies enjoying foundation support. Using now familiar techniques, the committee weaved a web of associations in order to establish the 'guilt' of an immediate target. Adult education did not escape the Committee's scrutiny; viewed through conservative lenses, much of the field's work and many of its prominant figures were projected as subversive apparitions. In places, the final report reads like a selected "who's who" of adult education. Lindeman, Smith and other American Labor Education Service (ALES) directors were found to "all have a record of Communist front affiliation" (p. 106); Highlander's Dombrowski and Horton were "found in the company of red-fronters" (p. 309); other prominant adult educators 'named' included Adler, Beard, Commager, Hutchins, Johnson, Kallen, Kilpatrick, Liveright and Starr.

Despite the field's resistance to McCarthyism, its social movement connections were fraying. The changing political climate was squeezing the social democratic essence from mainstream adult education's social philosophy. This was compounded by longer term trends that were now becoming more evident. The field was professionalizing and subtly changing its constituency. Between 1955 and 1957 this had little effect on the coverage of domestic issues such as civil rights, but in the AEA and FAE literature, there was a noticeable shift in the way international issues were now treated. The field was locating itself within the cold war consensus that McCarthy had helped fashion.

McCarthyism had a more direct impact on adult education in two other ways. First, it isolated further the social movement impulse; by the end of the decade, agencies like Highlander were particularly vulnerable. Second, it intimidated foundations and educational agencies. Particularly hard on adult education was the demise of the FAE which, after protracted negotiations following Hoffman's departure, was given a $7.5 million "farewell grant." The result was the phasing down and termination of the FAE, retrenchment by the AEA and the eventual demise of the CSLEA. As part of AEA retrenchment, editorial control of the journals passed into volunteer hands in mid-1957. This had little effect on *Adult Education* which had sometime earlier metamorphosed into a professional publication. *Adult Leadership*, however, changed dramatically. The second issues under N. P. Mitchell's editorship was devoted to a single article, Bonaro Overstreet's "The adult educator and the world communist." Notwithstanding the intensity of cold war feeling, this was a tru ly incredible piece. More measured than in the heady days of McCarthy, the central theme still had a familiar ring: education had been infiltrated by subversives; so too had the civil rights movement. Overstreet's article received an enthusiastic reception; even the FBI's J. Edgar Hoover wrote to commend its publication. A few voices were raised in protest, not to defend communism, but to affirm liberal values. They were but muffled echoes from the past.

CONCLUSION

At the height of McCarthyism, Kapplan (1954) admonished adult educators for their failure to defend "complete freedom of discussion and information (that) lies at the very heart of their activities" (p. 2). Six years later, Harold Higham (1960) claimed that during the McCarthy era adult educators had hid in their "specialization". These judgements were a little harsh; this study has highlighted a more active response to McCarthyism than these critics suggested. Nevertheless, both observations are insightful. From as early as 1948, Kaplan and others had been emphasizing the destruction of liberal values and constitutional rights. While there is no doubting the courage of these stands, McCarthyism had already succeeded in redefining the political agenda; few in adult education defended the New Deal and the idea that the state should act as an agent of reform. And it is in this sense that Higham's comment about specialization is so helpful, for the whole concept of a professional field is premised on quite different philosophical and theoretical assumptions than were the WEA-Oxford and Keppel alliances. These observations highlight the theoretical significance of this study's findings and the interpretation offered. In reintroducing McCarthyism into the history of mainsteam adult education, this study suggests revisionist approaches to the interpretation of the field's subsequent development and its much lamented loss of social commitment.

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APPLICATION OF STUFFLEBEAM'S CIPP MODEL FOR EVALUATING THE SUITABILITY OF EDUCATIONAL COURSEWARE AND THE IMPACT OF COMPUTER TECHNOLOGY ON ADULT LEARNERS AND EDUCATORS

Linda H. Lewis and Christine A. Murphy

Abstract

The purpose of this paper is to describe the process involved in the selection and application of a theoretical model used to guide a comprehensive evaluation project. The project was sponsored by a major corporation involved in the development of educational software and epitomizes the potential for partnerships between education and the private sector. The purposes of the project were to determine the suitability of existing courseware for low literate adult learners and to assess the impact of computer technology within the learning environment. Description of the CIPP Model and details regarding the specific application of its four components are included.

APPLICATION OF STUFFLEBEAM'S CIPP MODEL FOR EVALUATING THE SUITABILITY OF EDUCATIONAL COURSEWARE AND THE IMPACT OF COMPUTER TECHNOLOGY ON ADULT LEARNERS AND EDUCATORS

The purpose of this evaluation project was to determine the suitability and appropriateness of educational software for use with adult learners and to determine the impact of computer technology on the learning environment. Two-hundred teachers and 833 students, representing a variety of programs and locations across the country, provided explicit feedback and specific suggestions for strengthening the courseware. The entire evaluation project was sponsored and underwritten by a major corporation interested in developing software for low literate adult learners.

Since the project involved 14 programs in six states, a great deal of cooperation was required from the adult educators and administrators involved. Therefore, a participatory evaluation model was selected to guide evaluation activities. This concept is predicated on the assumption that there is active involvement by all key participants in the development, implementation, analysis, and reporting stages of the project.

The CIPP Model, developed by Stufflebeam (1985), was selected as the most appropriate model for the evaluation. There are four components included in the model and each is associated with specific "decision questions". The four components and their respective decision areas are described below.

(1) Context

This component is concerned with the identification of the environment and the various target groups. The objectives are to determine the unmet needs of the target population and to identify the obstacles and/or constraints that may impede meeting those needs. During this phase, the rationale for the specific goals and objectives of the project are also developed.

This aspect of the evaluation was addressed by the project sponsor during the conceptualization and development of the proposed project. Executives spent one year gathering data relative to adult education programs, adult learners, and adult educators involved in teaching literacy skills. This extensive data collection served to identify potential sites for the project and strategies that would assist in addressing obstacles and constraints.

(2) Input

This component is concerned with the allocation and utilization of human and material resources to accomplish project goals. During this phase, relevant approaches for the integration of computer technology and software into various adult educational programs are developed and executed. Determinations regarding budgets, procedures, personnel, students, teachers, and schedules are made.

This aspect of the evaluation plan was given careful consideration by the corporate sponsor, as well as by the project evaluators. It was important, however, to continually re-examine and modify, as necessary, the alignment of such things as project goals, objectives, and procedures. This required that the evaluators assist project participants from the various study sites by clarifying such items as time schedules, additional resources required, data collection methods, and data analysis procedures.

(3) Process

The objectives of this phase of the evaluation project involves determining the extent to which project-related activities are on schedule and obtaining feedback to ascertain whether or not the implementaion of the project is proceeding as originally planned. Included in this phase are various activities such as the maintainence of records documenting the activities and procedures being implemented and modifications to the process when indicated.

The evaluation consultants devoted a substantive amount of time to this component by working in close cooperation with corporate project managers and representatives from the study sites. Activities included recording observations of project implementation, conducting training sessions, and instituting new procedures as required.

(4) Product

This final evaluative component involves measuring, quantifying, interpreting, describing, and judging the accomplishments of the project. The goals are to ascertain the extent to which the project has met the needs of those it intended to serve and to conduct an extensive search for unintended outcomes.

The evaluation consultants focused considerable time and attention on this component and provided a substantive written report detailing how the courseware was received along with suggestions for the improvement of existing programs. In addition, the impact of computer technology on the learning environment was assessed by measuring the attitudes of low literate adult students toward computers at both the beginning and end of the project.

Advantages of the CIPP Model

The primary advantage of the CIPP model lies in its improvement-oriented approach. This approach allows for continual re-evaluation and refinement of the project at every step in the process. For example, when it was determined that low-literate adults had difficulty responding to questions on the written evaluation form as originally designed, additional questions were developed and tested to elicit information required for the product component of the evaluation project. In another instance, as raw data were received from the various study sites, it was noted that in some cases, forms were not being utilized correctly. Thereafter, additional training sessions were conducted at specific sites to remedy this situation. In both cases, the advantage was that procedures could be changed and improved mid-point to allow for quality information to emerge at the conclusion of the project.

Disadvantages of the CIPP Model

In a comprehensive project such as the one described above, the generation of many specific decision questions can be somewhat cumbersome. It is suggested that general guiding questions be developed to simplify and streamline the process at every step. These same questions could then serve to guide the instrument development, data collection strategies, and final report format.

Conclusions

Using a theoretical model to guide the evaluation activities of such a comprehensive project has proven invaluable for helping to systematize, organize, expedite, and improve the evaluation process. It has also helped to clarify the roles and responsibilities of all those involved in the project. The process component, in particular, is most helpful for improving current processes and for directing the way in which changes might be applied in future projects of a similar nature.

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ADULT SELF-DIRECTED LEARNING READINESS AND EDUCATIONAL ACHIEVEMENT

Huey B. Long, University of Oklahoma

Abstract: This research examines the relationship between adult self-directed learning readiness and two important academic variables: educational performance and educational level. Correlations between Guglielmino's SDLRS and educational performance (cumulative gpa) and years of schooling are reported. A sample of 93 college students from 17 to 51 years of age was studied. Grade point averages range from 0.00 to 4.00 over 13 to 19 years of education.

Self-directed learning readiness and educational achievement is a complex topic. We know little about the various factors that cause or influence persistence in educational activities (Long, 1983). Also, little is known with certainty about the variables associated with mastery of a body of knowledge or skill (Long, 1983; Knox, 1977). Long (1983) and Knox (1977) among others, have identified some of the variables; including health and intelligence. Intelligence is perhaps the one variable most often identified with educational performance defined in terms of course grades. But, those familiar with the work of Guilford (1967) know that intelligence itself is a complex concept that seems to include numerous sub-elements.

Thus, it is no surprise that educators of adults are concerned with ways and means of explaining and predicting educational achievement of at least two kinds: level of achievement (quantity) and educational performance (quality).

Literature Review

Even though numerous studies based on Guglielmino's scale have been conducted since 1977 (Brockett 1985a, 1985b; Caffarella & O'Donnell 1988, Long 1986) the question of how SDLR and educational achievement may be related has not been adequately addressed. Only one study (Savoie, 1979) has been located that was designed to study the relationship between SDLR scores and course performance. Six studies including educational achievement level (years of schooling completed) have been identified and reviewed (Brockett 1985a, Finestone 1984, Hassan 1981, Long & Agyekum 1983, 1984, Zemke 1982).

The theoretical foundations of SDLR are assumed to be related to two important educational variables: (a) achievement level, i.e., the amount of education one has completed and (b) grade point average, i.e., a qualitative measure of educational performance. If SDLR is a learned attitude, or more specifically, a consequence of education, a positive correlation between educational achievement level and SDLR should exist. Furthermore, if SDLR is a reflection of one's ability to learn, or if it indicates a tendency towards mastery of knowledge or skill, or if people who have it self-select themselves up the educational ladder, then a similar positive correlation should exist between SDLR and grade point average (gpa).

Support for the assumptions of associations between SDLR and the two educational variables is suggested by at least five of the eight factors Guglielmino identified with SDLR. Specifically she reported the following factors underlie the SDLRS: (a) openness to learning; (b) self concept as an effective learner; (c) initiative and independence in learning; tolerance of risk, ambiguity and complexity in learning); (d) acceptance of responsibility for one's own learning; (e) the love of learning; (f) creativity; (g) future orientation and (h) ability to use basic study skills and problem stating skills (Guglielmino, 1977/78).

Based on the above factors contrasting inferences can be drawn. One could perhaps argue that these specific factors could be associated with rejection of schooling as reflected by a measure of educational achievement in years. According to this view, schooling may stifle or diminsh self-direction in learning. A negative significant correlation (between SDLRS and educational achievement level) would support this position. Another argument is that the identified factors would interact with years of schooling and become progressively stronger with achievement level. A positive significant correlation between SDLR and educational achievement level would support this argument. A similar debate could conceivably exist concerning gpa. On one hand, students scoring high on Guglielmino's SDLRS could be expected to have high gpas because of the strength on the above factors, if one assumes the factors and schooling are positively associated. The counter argument suggests the contrary: a negative correlation between SDLRS and gpa based on the belief that gpa is a result of teacher rewarded behavior that is negatively associated with SDLRS. The absence of any significant correlation between the variables would raise questions about the theory of the SDLRS and the sample.

Generally, the literature currently is silent or ambivalent on the above positions. Therefore the purpose of this study was to determine the association between SDLR and the two selected measures of educational achievement: (a) gpa and (b) level of education.

The major contribution of this research resides in the extension of knowledge concerning the relationship between SDLR and gpa. A secondary contribution is derived from the additional findings concerning SDLR and educational level. The latter contribution is also potentially strengthened by the use of a wider mathematical range in educational achievement, i.e., achievement measured in both years and quarter hours completed. Previous studies have used an extremely narrow numerical range based on years of educational achievement. While one hypothesis examined in this investigation is also based on a narrow range in terms of years the corollary use of quarter hours completed to test another hypothesis provides a wider mathematical range for calculating correlations. It is not believed this additional research design feature substantively reduces the effects of the veridically narrow education achievement level range. Yet, it is believed it addresses a technical issue associated with the mathematical artifact emerging from a situation where the lowest and highest subjects may be separated by as little as 4 years. While this design element does not address the substantive issue it should be instructive in suggesting the relative importance of the design question and the substantive question.

Methodology

Ninety-three college students, ranging from freshmen to graduate students, at two Georgia colleges were selected as subjects for this study. One subject was dropped from the study because of incomplete information. As a result 92 students were included in the final sample. The sample was a fortuitious one as students in six classes (three classes at each of two different colleges) were selected on the basis of instructor cooperation.

Limitations

Because of the fortuitious nature of the sample used in this study generalizations to a larger population should be made with caution. Comments concerning findings and conclusions are limited to the sample studied unless otherwise noted.

Assumptions

It was assumed that the SDLRS is a valid and reliable measure of self-directed learning readiness. In addition it was assumed the subjects provided accurate and candid responses to the SDLRS items and to the question concerning years of school completed. It was also assumed the gpa is a valid measure of quality of educational achievement, i.e., a high gpa indicates greater mastery of subject matter content, understanding and academic skills that a low gpa.

Instrumentation

The total study included the use of Rokeach's Dogmatism Scale (Rokeach, 1960), Couch and Kenniston's Agreement Response Set Instrument (1960), Duttweiler's Internal

Control Index (1981) and Guglielmino's Self-Directed Learning Readiness Scale (1977/78). Discussion of additional findings is found in Long and Agyekum (1984). Each subject also completed a personal information form that solicited information concerning age, sex, race, and educational achievement level (in terms of years of school completed). Later the Registrars of the two colleges provided information on grade point average and quarter hours completed. It was also assumed the gpa is a valid measure of quality of educational achievement, i.e., a high gpa indicates greater mastery of subject matter content, understanding and academic skills than a low gpa.

Guglielmino's Self-Directed Learning Readiness Scale

Guglielmino's SDLRS is a 58 item Likert type scale developed to determine the extent to which individuals perceive themselves to possess skills and attitudes often associated with self-directed learning readiness (Guglielmino, 1977/78). Several studies have reported on the reliability and validity of the SDLRS. Guglielmino estimated the reliability to be .87, as did Brockett (1985). Hassan (1981) reported the internal and predictive validity of the scale as "being high". Others (Finestone, 1984 and Long & Agyekum 1983, 1984) have reported findings that support the scale's construct validity.

The most troublesome questions concerning the reliability and validity of the SDLRS have been raised by Brockett (1985a, 1985b) and Long and Agyekum (1983, 1984, 1987). Long and Agyekum (1983) were not satisfied with their findings concerning racial differences on the several instruments. However, they indicated until additional data area available they believe the SDLRS to be valid. Brockett (1985a) questions the appropriateness of the scale when used with subjects not engaged in institutionally sponsored education and with subjects of low reading ability. As neither of these conditions were believed to apply in the current study Brockett's concerns were not percieved to be critical to the results.

Hypotheses

Five major hypotheses were tested in this study using an alpha level of .05 for rejection of the null-hypotheses. The hypotheses, stated in the null form, are as follows:

1. There is no significant correlation between SDLRS scores and college grade point average.
2. There is no significant correlation between gpa and educational achievement level, defined in terms of years of school completed.
3. There is no significant correlation between gpa and scores and educational achievement level, defined in terms of quarter hours completed.
4. There is no significant correlation between SDLRS scores and educational achievement level, defined in terms of years of school completed.
5. There is no significant correlation between SDLRS scores and educational achievement level, defined in terms of quarter hours completed.

Data Analysis

The data for all hypotheses were analyzed through the use of the SAS statistical package as described in the SAS Users' Guide: Basics, 1982 Edition to obtain the Pearson Product Moment correlations. Due to the nature of the hypotheses and data analyzed the zero order correlation was believed to be the most appropriate statistical analysis. After the initial treatment a series of partial correlation analyses (using the SPSSX statistical package) were completed to identify the effects of holding selected variables constant.

Findings

Findings generated by this investigation are reported below in two divisions. First, general descriptive information concerning the study is provided in Tables 1 and 2 Second, findings concerning the five major hypotheses are reported in narrative form.

Hypotheses

Hypothesis one concerning the relationship between SDLRS scores and grade point average was rejected. A correlation of 0.22, significant at the 0.04 level was generated by the analysis. Hence, the alternate hypothesis of a correlation between the SDLRS and gpa was supported. Additional analysis through partial correlation reveals the association between SDLRS and gpa cannot be explained by the effects of age. The influence of age, however, is more problematic as the significance level for SDLRS and gpa when age is controlled was just beyond the region for rejecting the hypothesis of no relationship. See Table 2 for partial correlations. Further study is recommended.

TABLES 1 AND 2 ABOUT HERE

Hypothesis two concerning correlations of importance of the relationship between educational level (years of school completed) and grade point average was rejected. A correlation of 0.05, significant at the 0.0001 was noted. Additional analysis controlling for the effects of age leads to the conclusion that the correlation between educational level and gpa cannot be explained by age of the subject.

Hypothesis three was also rejected. A significant correlation between grade point average and quarter hours completed was also noted. A coefficient of 0.32, significant at the 0.002 level, was produced by the analysis. Therefore, the alternate hypotheses of a correlation between educational level, in quarter hours of college completed, and grade point average was supported.

The fourth hypothesis concerning the relationship between SDLRS and educational achievement level, defined in terms of years of school completed, was not rejected. A correlation coeffieient of 0.12, significant at the alpha level of 0.26, was generated by the data analysis.

Hypothesis five, concerning the relationship between SDLRS and educational achievement level, defined in terms of quarter hours of college work completed, was not rejected. A coefficient of 10.07, significant at the 0.50 level was identified.

Conclusions

Based on the data obtained for this study and the results of the statistical analyses, the following conclusions were drawn:

1. There is a significant correlation between gpa and educational achievement level, defined in terms of years of school completed. However, when the effects of age are controlled, the correlation is not significant.
2. There is a significant corelation between gpa and educational achievement level, defined in terms of years of school completed.
3. There is a significant correlation between gpa and educational achievement level, defined in terms of quarter hours of school completed.
4. There is no association between SDLRS and education achievement level, defined in terms of years of schooling completed.
5. There is no association between SDLRS and education achievement level, defined in terms of quarter hours of college work completed.
6. There is a significant correlation between SDLRS and age when the effects of educational achievement level are controled.
7. There is a significant correlation between SDLRS and gpa when the effects of educational level are controlled.

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Table 1

Descriptive Data for 93 College Students

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
Age	93	26.40	7.89	2455.000	17.00	51.00
Ed. Level (Yrs)	93	15.59	1.91	1450.000	13.00	19.00
Ed. Level (Qtr. Hrs)	93	58.49	57.67	5440.000	0.00	229.00
GPA	93	2.47	1.13	2294.90	0.00	4.00
SDLRS	92	229.90	21.71	21151.00	170.000	289.000

Table 2

Partial Correlations: SDLRS, Age, Educational Level and GPA

Variable 1	Variable 2	Controlled Variable	Co-efficient	Degrees of Freedom	Proba-bility
SDLRS	GPA	AGE	.168	89	.056
SDLRS	GPA	Ed. Lev.	.187	89	.038
SDLRS	AGE	Ed. Lev.	.179	89	.044
SDLRS	Ed. Lev.	AGE	-.020	89	.424
Ed. Lev.	GPA	AGE	.419	90	.0001

INTENTIONAL LEARNING AND CHANGE BY ADULTS WITH TYPE II DIABETES

Patricia M. Lundgren, R.N., Ed.D., Nurse Educator, Indian Health Service, Browning, Montana

(This research was supported by The Kellogg Center for Adult Learning Research, Montana State University, Bozeman, Montana.)

Abstract

Instructional programs are frequently directed toward bringing about changes in behavior. Despite this fact, adult educators often fail to examine what factors lead to behavior change. This study examined adults' diabetes related health changes and the learning involved in these changes.

Statement of the Problem

Diabetes is a disease which requires major attention by persons who are afflicted with it and by health care providers who work with diabetics. In order to control the disease, the person with diabetes needs to make several major lifestyle changes and to maintain them over a lifetime. Health care professionals need to work with each individual to develop a management plan, and to assist them in understanding diabetes and its treatment, and making necessary lifestyle adjustments. Diabetes education is a major mechanism through which these tasks are achieved.

An approach to diabetes education has been advocated which prepares the diabetic to be responsible for controlling the disease. It involves the individual in planning, decision making, and problem solving relative to control of the disease (Strowig, 1982 and Anderson, 1985). This approach varies from the traditional approach to diabetes education which focuses on persuading persons to comply with the regimen prescribed by their physician.

Tough (1971) pioneered study in the area of adults' independent learning projects. He established the notion that a great majority of adults regularly engage in self-planned learning activities. Several persons have attempted to explain adults' reasons for involvement in learning activities. Houle (1961) proposed a three way orientation to participation in continuing learning -- goal-oriented, activity-oriented, and learning-oriented. Developmental psychologists suggest that dealing with life tasks creates in adults a readiness to learn. Knox (1977) examined life changes, and linked learning with change events. Aslanian and Brickell's (1980) research demonstrated that coinciding with life transitions, adults experience the need, opportunity, and desire to learn. However, no learning activity is engaged in until a triggering event occurs.

In the late 1970's, Tough followed up on the idea that learning is a means through which adults accomplish life changes. He investigated adults' significant intentional changes (1982). His purpose in this endeavor was to understand how adults naturally change. He suggested that gaining insight into processes followed and resources used could assist professionals to facilitate better these change processes.

The basis for this study was a belief in the need to emphasize diabetics' capacities to be responsible for their diabetes. This emphasis is essential in both care provision and education efforts. The purpose of this study was to examine selected dimensions of intentional learning and change in diabetes related health areas made by persons with Type II diabetes. Some of the dimensions examined include:

-resources used in accomplishing the change,
-types of additional assistance which would have benefited the change process;
-factors which influenced persons' decisions to make their change;
-learning undertaken in the context of the intentional change process
-relationship between intentional learning and change.

Population and Sample

The population for this study was persons with Type II diabetes who are members of the American Diabetes Association and who live in the Bozeman and Billings, Montana areas. A self-selected sample of 49 persons was interviewed. Forty-six of these interviews were utilized for the study. Interviewees were approximately 55% female, all except one were Caucasian, and all were from a middle class background. Most persons were married, had at least a high school diploma, and were employed or retired from a wide range of occupations. Although persons were predominantly in the 65-75 year old age group, the actual age range was 23 to 82. Sixty percent had diabetes for 14 years or less; 20% for less than five years. Approximately 57% of the interviewees used insulin to control their diabetes; 11% were controlled by diet alone.

Methodology

Data were collected through structured, probing interviews which followed an adaptation of Tough's (1982) intentional change interview schedule. Respondents were asked what was the most significant intentional change in a diabetes related health area which they had achieved in the previous five years. All other questions were directed at understanding the processes which the persons followed in achieving their change, the learning which occurred in relation to the change, and demographic information.

In an effort to establish the validity of the interview schedule, three adult education specialists were asked to examine the instrument's face validity. Some suggestions about wording were made, and resulting changes were integrated into the schedule. Following these revisions, five interviews were conducted prior to the actual interviews. The purpose of these interviews was to check the interview schedule for clarity, wording and sequencing. Also evaluated were methods of recording interview data, whether adequate information was being recorded, and whether the information as recorded could be analyzed according to the plan. The result of these interviews was that the interview schedule itself did not need to be altered. However, the data sheet on which information obtained during the interviews was recorded was expanded, and the need to record more actual quotations was identified.

The consistency of the interview schedule and the interviewer's intrarater reliability were demonstrated by contacting five respondents by telephone two weeks after their interviews. Ten of the basic interview questions were repeated. These responses were compared with original responses. Persons answered an average of 84% of the responses similarly. This was considered a verification of reliability.

The reliability of the interviewer's process for coding data was demonstrated by having a second person listen to tapes of three of the pilot testing interviews. This person coded interview data while listening to the tapes. Both the interviewer's and this person's data sheets were compared. This process revealed that both persons' ratings were similar in all cases.

Description of the Data

Quantitative and qualititive data were collected for this study. Quantitative data were grouped into predetermined categories and analyzed using descriptive statistics. Qualitative data, after being carefully examined by the researcher, were grouped and regrouped to fit into appropriate categories based on similarities among responses. Once the categorizations were accomplished, the total number, the mean number, and the percentage of persons in each category were determined.

Conclusions

1. Individuals see themselves as being primarily responsible for their intentional diabetes related health changes. The mean percentage to which persons credited themselves with responsibility for the change process varied from 45% in choosing the change, 61% in planning it and 79% in implementing it. They assumed a mean of 60% of the responsibility for their

total change. These figures differ from those found by Tough (1982). Persons he interviewed regarding general changes reported assuming 70% of the responsibility for accomplishing their change with a more narrow spread of responsibility among the three tasks: 68% in choosing, 69% in planning and 73% in implementing. These discrepancies reflect the different situation which exists for persons making diabetes changes.

"Other" persons influence diabetics' decisions to make diabetes related health changes to a much greater extent than they influence people who are making general changes. In addition, diabetics assume more responsibility for implementing their intentional diabetes related changes than persons who make general changes. These facts indicate the need for health professionals to give individuals ultimate control over achieving their changes.

2. Individuals use several resources as they accomplish diabetes related health changes. Health professionals play a major role in helping people choose and plan diabetes changes. In this study, they were credited with a mean of 18% of the responsibility for achieving individuals' change: 28% for choosing, 21% for planning, and 6% for achieving. Tough found professionals were responsible 3.3% for choosing, 8% for planning, and 8% for implementing general types of changes. Physicians were reported as the most important resource for persons' decision to change, whereas dieticians and nurses were the most frequent resource for planning how to accomplish the change.

Next to the person him or herself, family/ friends/ and other nonprofessionals were cited as being the most important resource for implementing persons' changes. These persons were credited with 9% of the responsibility for implementing the change (and 15% for choosing and 10% for planning). This is much less than Tough's 25% for choosing, 21% for planning, and 17% for implementing. A reason for these lower percentages seems to be the large responsibility credited to professionals.

Nonhuman resources were used to a greater extent in diabetes changes than in general intentional changes. Whereas in this study nonhuman resources were credited with a mean of 8% of the responsibility for the total change, Tough found that they were credited with about 4% of the responsibility. This probably reflects the wide array of printed material resources which are available for use by diabetics.

3. Diabetics express an unmet need for support from individuals with diabetes and from support groups. The major additional resource which persons would have liked to have had for their change process was a diabetes support person or a support group. These individuals' diabetes association affiliations were apparently not dealing with their felt support needs. Almost one-third of the interviewees expressed

an unmet need for support from non-family persons.

4. Triggers motivated persons' decisions to change. Aslanian and Brickell's (1980) theory regarding "life transitions" motivating learning and "triggering events" spurring a person's decision to learn at a particular point of time has relevance for this study. An identifiable trigger event preceded the changes.

The major reason for persons' changes were the desire to control their diabetes and to improve their general health. Events occurred which made persons acutely aware of their need to change. These events fit Aslanian and Brickell's definition of triggering events. Three major types of triggers predominated in this study: developing an actual physical problem, having a family person experience a serious complication of diabetes, and experiencing positive physical and emotional benefits as a result of following their care regimen.

5. Learning occurs in relation to intentional change. It can either motivate a decision to change or occur as a result of a decision to change. Learning served two purposes relative to intentional diabetes health changes: persons either gained new information and made a change as a result of the new knowledge, or they decided to make a change and set out to learn new information in order to accomplish their change. Thirty-nine percent of the persons interviewed learned in response to their decision to change, whereas 23% of these persons' learning projects preceded the decision to change.

Knox (1977) and Tough (1982) both suggest that persons are likely to respond to a change event or problem by engaging in a learning effort. Aslanian and Brickell (1980) also suggested that life changes are reasons for adult learning. It is Aslanian and Brickell who suggested that learning can occur in anticipation of, accompany, or follow a transition. This idea is suported by the findings of the present study. Indeed, learning occurs in relation to intentional diabetes related changes. The relationship between learning and change is probably, as suggested by Knox (1977), dependent on the individual, his or her environment and resources, and the particular change.

6. Learning projects were goal-oriented. The learning projects which were reported occurred in the context of change processes. As such, it is not surprising that the learning was "goal-oriented" (Houle, 1961). All of the learning projects by diabetics were directed at either understanding their disease and its effects on their bodies, or at providing them with the knowledge and skills needed to implement a specific change.

7. The majority of Type II Diabetics do not engage in learning projects in support of accomplishing their intentional diabetes related change. Tough stated in 1971 that learning projects are a primary means through which adults change. A major motivation for adult learning is the persons' desire to make changes. Despite the fact that learning occurs in relation to intentional change, only 39% of the persons who had made intentional diabetes related health changes in the prior five years had engaged in learning projects as a way to support accomplishing their changes. (A learning project was defined as a series of clearly related learning efforts which added up to at least seven hours of effort.) Tough estimated that 30% of all intentional changes involve deliberate learning efforts (1982, p.64). Of the persons who were involved with projects, 80% were the primary planners of their learning. This percentage falls within the range identified in previous learning project research. Reading was the major learning activity engaged in as persons accomplished their changes. Attending classes and group meetings, meal preparation activities, and talking with health professionals were other forms of learning activity.

Of the persons who did not engage in learning projects, two indicated that they had been involved in learning endeavors which took less than seven hours. In addition, most persons seemed to have engaged in random learning activities which resulted from their interest in diabetes.

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WORK EXPERIENCE VS. LITERACY:
A CASE FOR COLLABORATION

Robert C. Mason
Professor of Adult and Continuing Education
Director of the Office of Research and Evaluation in Adult and Continuing Education (RE/ACE)
Northern Illinois University

Joan E. Bitterman
Program Coordinator for RE/ACE
Doctoral Candidate in the Adult and Continuing Education Graduate Program
Northern Illinois University

ABSTRACT: America is facing a labor shortage and at the same time minorities and the poor are unemployed in large numbers. There is a widening mismatch between training and skills workers have in the U.S. and those employers need. Northern Illinois University's Office of Research and Evaluation in Adult and Continuing Education (RE/ACE), in conjunction with the Illinois State Board of Education, recruited and developed three diverse "demonstration sites" in the state (Lake County, the Quad Cities, and Southeastern Illinois), where programs were designed and implemented to ascertain how to increase collaboration between state-supported adult education and vocational education providers. Through this type of collaboration, the gap between workers' capabilities and employers' needs may begin to lessen, as people are truly educated for employment through effective work experience and literacy.

Throughout the nation an ironic and paradoxical dilemma exists: America is facing a labor shortage and at the same time there are double digit unemployment rates for minorities and the poor. Why is this happening? There is a widening mismatch between work experience and literacy skills workers have and the literacy and work experience skills employers need. The U.S. Department of Education estimates that there are 25 million illiterate Americans -- those who cannot read or write a simple sentence. Approximately 60 million more Americans are functionally illiterate, unable to read above fifth-grade level (Naisbitt, 1987). Yet it is the service industry jobs that are growing in the U.S., and they require more basic education than traditional jobs in blue collar industries. According to a Chicago Tribune article, January 3, 1988, the U.S. Labor Department forecasts that the service-producing industry will add nearly 21 million jobs to the economy by the end of the century. Employment in manufacturing will decline to 14% of the labor force and employment will grow in areas that require the most education, such as professional workers, technicians, and administrative and managerial workers.

"Education for employment" has become the local and federal government's charge to adult basic and vocational education agencies, but communication and collaboration between these government-supported programs remains limited. One exception is in Alton, Illinois, where the J.B. Johnson Career Development Center has invited Lewis and Clark Community College to become a joint tenant of the vocational education facility (Miles, 1987). Regional vocational facilities have traditionally served the high school population, and while the traditional high school age student is decreasing in number, the pool of illiterate adults is growing each year. The time-sharing program in the Johnson Career Development facility focuses on the necessity for high quality education for employment programs to be delivered to both youth and adults who are preparing for entry-level employment or further education. Yet the only well-known similar arrangement found in the nation is in Scottsdale, Arizona, where a new building is being erected for adult as well as youth vocational training.

Businesses have traditionally not intruded in American education. Yet many now feel, and understandably so, that they must become aggressively involved as the last link in the "education for employment" chain. A large amount of government money in the U.S. has for decades been poured into welfare and minority unemployment programs. Minorities and the poor often dropped out of such programs, knowing there were no private-sector jobs waiting for them when they finished their training. Now it is the private-sector who needs them, and businesses understand that significant investments in education could ultimately pay off (Business Week, 1987). Educators of adults must begin to see how they can help generations of workers in this country by collaborating with several agencies and programs to train the hard-core jobless. For if the millions of unemployed adults in this country are left uneducated, companies will find other ways to fill their needs such as cheap immigrant labor, technology and shipping jobs overseas. No responsible society can follow that course.

A review of the related literature since 1980 reveals more written on the collaborative efforts of adult education, business, and vocational education in the United States. Most of the articles point out the problem of needed collaboration, while a few actually document new programs created for education for employment purposes. For example, the Peninsula Academie, a California program, was started for potential high school dropouts, offering them hands-on work experience along with basic academic skills (Dayton, Reller, 1987). The program provides the students with training for existing jobs, integration of vocational/technical training with basic education and development of employability skills.

The Community College of Allegheny County in Pennsylvania began a program to assist unemployed workers enhance their employability (Bostaph, et al, 1985). Once accepted, the workers are placed into programs such as adult basic education and non-credit continuing education courses to sharpen job skills. General Motors and the United Autoworkers formed a committee for the retraining and providing of job counseling and placement programs for their displaced workers (Rielley, 1983).

Based on the premise that adults are interested in utility of knowledge and better jobs, a collaborative effort was formed in Mt. Clemens, Michigan (Garbarino, 1984). The school district, Department of Social Services, adult education personnel and a vocational advisory committee (consisting of business and industry representatives) formed what was called the "full-service" concept. The program offers basic skills while providing opportunities for gaining occupational skills and retraining. For a final example, an Omaha-based company created a program to teach employees standard English (Tighe, 1983). The rationale for the program was that industry should abolish the double standard that exists among employees and bring the non-English-speaking employees into the corporate mainstream by developing their language skills.

The state of Illinois, along with state supported community colleges and vocational centers, have expressed an interest in encouraging similar collaborative projects in Illinois wherever possible. Northern Illinois University's Office of Research and Evaluation in Adult and Continuing Education (RE/ACE), developed a grant project to study existing collaborative efforts between adult education Area Planning Councils (APC) and Regional Area Vocational Systems (AVS) in the state in 1986, and produced a valuable study. Armed with this new information about where collaboration breaks down and how it may better succeed, another grant from the Illinois State Board of Education (ISBE) was written this year by RE/ACE to establish three demonstration sites in the state to serve as models for collaboration between adult education and vocational education providers. Area Planning Council membership consists of adult education providers within certain regions of the state (community colleges and public schools) and Area Vocational System Councils are made up of vocational education providers divided by somewhat different geographic regions than the APCs. Forty-one Area Planning Councils operate in Illinois, while there are 61 Area Vocational Systems. At this juncture, only limited liaison has been established with business and industry. With the incentive funds provided ($4,000 for each site), the RE/ACE research team decided to focus on articulation and collaboration between adult education and vocational education providers primarily. The three sites chosen for the case study by ISBE personnel and project staff were Lake County, the Quad Cities, and Southeastern, Illinois. They were chosen due to their already outstanding reputations for providing both vocational education and adult education services in their respective areas. Additionally, the sites selected were representative of the entire state; one from the Chicago area (Lake County), one downstate metropolitan area (Quad Cities) and one rural southern Illinois area (Southeastern). Each site was given the opportunity to assess their own joint needs and, with assistance and leadership from project staff, design their collaboration project.

On September 15, 1987, the Director of the Area Planning Council (adult education representative) and the Planning Grant Director (vocational education representative) from each of the three sites met with ISBE contract adminnistrators and the RE/ACE research team in Springfield. At that meeting, the purpose of the project and general ideas for site activities were discussed. At the close of the meeting, the group had decided that each site would submit a written, quarterly project report and meet as a group once more in February for a mid-point evaluation session.

The Lake County area chose to assess their current collaborative efforts in adult education and proposed to include the vocational education agencies in their shared information network and activities. Even some private adult education services in the area were involved such as the Urban League. Lake County's primary goal was to establish the larger network through a Directory of agencies and their services. The Directory was to be set up in such a way so that an adult learner could be channeled from education to employment. And special attention was to be paid to the clarity of the index and headings, so it would be easy for the general public or service personnel such as public aid workers to read and understand. The booklet went to print on March 15, 1988 and was presented at a joint APC, vocational education, and Job Training Placement Act (JTPA) personnel workshop hosted by Mary Charuhas (APC Director) and Lake County Community College in Grayslake, Illinois. The new Directory was a resounding success and a first step in the link to better communication and collaboration of adult education providers in that area. The data was collected in a collaborative way to make participants feel a part of a new state-wide team effort, rather than threatened by change and new ideas. This "internal marketing" concept was an important goal achieved in the Lake County area.

The Quad Cities area has also established a new network of communication between the Blackhawk Area Planning Council (APC) and the Quad Cities Regional Area Vocational System (AVS). Blackhawk Community College has designed and implemented a number of impressive programs geared for disadvantaged adult learners in the last five years, but has never involved the Regional Vocational Systems at any developmental stage. Otto Schweinberger, Dean of Continuing Education at Blackhawk and Director of the APC, has as a result of this project coordinated area programs such as "Single Homemaker," "Parents Too Soon," and "Displaced Homemakers" with the Planning Grant Director for the area, Michael Hanlin. The planning grant director, who represents all high schools and community college vocational education programs in the region, has developed a comprehensive curriculum project as a result of this project. Leaders from APC programs and AVS will work together to develop more effective education for employment programs. The projects were highlighted during both APC and AVS meetings in late 1987 and early 1988, with the result of both groups jointly developing promotion materials, leading staff cooperatively and evaluating program effectiveness. The enrollment and satisfaction levels in each program will be assessed in the near future to determine the influence of the articulation/collaboration efforts.

The Southeastern area has implemented a project that addresses the adult illiteracy syndrome at its roots -- the high school drop-out. Southeastern Illinois College (SIC) and the Southeastern Illinois Vocational System (SIVS) under the leadership of the APC Director, William Hull; Planning grant Director, Jack Rawlinson; and SIC Continuing Education Director, Richard Hagan, have collaborated on a drop-out prevention program called "Power of Choice." The 70,001 Project, a federally funded project in Washington, DC providing drop-out prevention resources to school districts nationwide, was consulted and promotional materials were printed to advertise the program. As a final phase to the project, workshops utilizing the newly developed training materials and resources (outlined on the printed brochures) were plannned for area high school and college counselors. The unique aspect of these workshops were the joint collaboration to prevent drop-out from one system to the other. Finally, a "library" of resource materials regarding drop-out prevention were collected for use by both high school and college personnel.

These initial projects are encouraging and exciting in the outcomes already achieved and in the promise anticipated for the future. Collaborative efforts in these three areas can serve as models for similar projects throughout the nation, as it is apparent that they will continue to expand beyond the timelines of the state grant. As business and industry note adult education's and vocational education's new energy to work together, the final link to education for employment will be more assessible and effective.

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Effects of An Interactive Video
Adult Literacy Instruction System

James H. McElhinney
George S. Wood, Jr.
Ball State University

ABSTRACT

PALS, a computer based instructional program uses learner controlled, touch sensitive video, synthesized voices and a comic book format to teach reading to adults. Learners also use word processors and learn keyboard skills to develop spelling and produce compositions. Observation, interview, and test data show the system to be effective with adults who enroll.

Effects of An Interactive Video Adult Literacy Instruction System

James H. McElhinney
George S. Wood, Jr.
Ball State University

A. Statement of the Problem

There is little doubt that computer based instruction is on the verge of becoming a common instructional mode in adult and continuing education. One of the first systems to be developed and marketed by a major computer company is the Principle of the Alphabet Literacy System (PALS), introduced in 1987 by IBM with claims that it produced learner gains of as much as three grade levels within 100 instructional hours over a 20 week period.

The program represents a major financial investment in technology and personnel for local programs and institutious. The research upon which the original claims were made by the manufacturer was limited in scope and depth. Many questions confront the potential user. How effective is the system? How do adults needing basic reading instruction respond to it? Is a teacher necessary or can it be a totally self-operated and self-directed process? These and many other questions needed answering. Using two sites that were piloting the system, a team of researchers conducted a study to get some answers.

PALS is based upon a "write-to-read" approach developed by the John Henry Martin Corporation. It uses computers and word processors to present learning activities in a multiple media format. Each system, serving up to 16 learners at a time, includes four computers and eight word processors. The computers have touch sensitive video screens, which present a story in comic book form. The format has words appearing first in writing in balloons over character's heads, then spoken through head phones. Learners study in pairs, controlling the rate of movement from scene to scene. During the second series of sessions, the developers added a feature in which learners can, when needed, call up a picture of a letter of the alphabet and a mouth pronouncing the letter. Learners hear the letter being pronounced and see the mouth forming the letter. Helped by this cue, they return to the story. Each of the other eight learners start with individual word processors. Here they learn to type and eventually to produce compositions. An Individual spends approximately half of each class at the computers, half at the processors.

B. Methodology

Data were collected by structured learning area observations, learner interviews, teacher interviews, administrator interviews and analysis of instructional and administrative records. ABLE I and II, normed for adults, were the pre and post tests used to determine changes in reading levels. A criterion-referenced test developed by the John Henry Martin Corporation for the program was also administered pre-post.

The study examined a total of 118 learners enrolled in the two pilot projects. They ranged in age from 14 years to 55 years, with a relatively even distribution of ages between the two extremes. Reading levels ranged from below grade one to above grade six. There were 58 males and 60 females.

Sixty-one learners (27 males, 34 females) had completed the program when the end-of-cycle data were collected. Thirty-five (23 males, 12 females) had dropped out.

Thirty-eight students, three teachers and two administrators were interviewed at the beginning, near the midpoint and near the end of both series of classes. Full period (100 minutes each) observations were made in all classes at the beginning, midpoint and near the end of the 100 hours of instruction. Monthly status reports and attendance records prepared by teachers were analyzed.

The PALS systems studied were located in Indiana, one on a university campus and the other in an urban office building in a central city. The project operated through a cooperative arrangement involving IBM, the state government office of occupational development, a local alliance for jobs, and the university. The evaluation/research project was conducted by the university, at the specific request of state government, to determine PALS' potential for making a statewide impact on adult literacy including persons in the state correctional system.

Four university faculty members, two reading specialists and two adult educators with research and evaluation credentials conducted the research.

C. Description of Data

The data collected was largely descriptive in nature, although statistical analysis (2-tail T-tests) were done on the reading test results. Data in support of the findings (see Section D) came from multiple sources and collection techniques, appearing in the results of interviews, observations, and records reviews. Thus, the findings are regarded as having been substantiated by processes of triangulation.

Data which ultimately proved to be relevent in addressing some of the important questions which prompted the study included the following:

Student Responses to the Multi-Media Technology

When asked what "turns you on" about the PALS program, interviewed students consistently mentioned working with the computers. Teachers also said that the computers were a "turn on" for students. Observers likewise found students were openly pleased with the opportunity to learn using computers.

Interviewed students testified to their positive feelings about the typing. Teachers confirmed the typing impacts upon students. Observers also were able to note instances of the effective rewards of successes at typing.

Teachers described such student behavior in the final monthly reports. They also testified to it in the end-of-cycle teacher interviews. Informal interactions with students by observers also produced indications of this.

Roles and Importance of Teacher

Observations resulted in all three teachers being rated "supportive," "responsible," "organized," "stimulating," "effective listeners," and "appropriately involved in the learners' learning activities." Also, all interviewed students identified "important things that the teacher did to help" them. All interviewed students gave the teachers the highest possible rating ("1" on a 1-5 scale) indicating their judgments of the importance of the instructor to their successes.

Observations at mid-cycle and end-of-cycle showed teachers to have on-going, facilitating and supportive roles in student work.

In mid-point and end-of-cycle interviews, the teachers described the "instructor's role" as including "diagnostician," "monitor," "teacher," "guidance person," "counselor," and "technician." When asked what particular skills or traits a PALS instructor "absolutely should have," they cited "an understanding of adult learners," "reading instruction insightfulness," and "counseling effectiveness." Observations and subsequent debriefings by the evaluation team confirmed that the instructors were expected to perform the roles indicated by them.

Consistently helping in "caring," "encouraging," and "respectful" ways was cited by both students and teachers as important teacher contributions to student progress.

Learning Outcomes

Paired 2-tail T-tests done on completers test scores at both sites showed differences in pretest and posttest scores on both ABLE and JHM (John Henry Martin test) which statistically establish that reading gains were made which are attributable to the PALS program.

Of the 61 completers at both sites, 34 showed pre-post test reading gains. Those who showed gains had a mean gain of 1.6 grade levels. Fifteen learners showed a gain of 2.0 or more grade levels. Nine completers showed no gain in reading scores. Ten showed negative results.

In 5 of the 10 cases where students showed negative test results, both teachers and students believed that they had class work as evidence of substantial improvement observed in class as evidence that the testing results were not always accurate measures of progress.

When male and female completer scores were compared, using the 2-tail T-test, their pretest scores showed no significant difference on either test (ABLE and JHM). However, the posttest mean scores showed females scoring significantly higher than males on both tests. Further T-test showed no significant differences between males and females in age, grade completed, or hours of instruction completed.

Every student interviewed, both at mid-cycle and end-of-cyle, said that the program had increased his/her desire to read and sense of success as a reader.

Absenteeism and Dropping Out

Nineteen of the 57 dropouts gave employment-related reasons for dropping out. Personal health/problems was the next most common reason given (16 dropouts).

In the interviews, all three teachers identified absenteeism as an important factor related to lack of progress.

There was no relationship between reading levels at the time of enrollment and the tendency to drop out or complete the program. Two-tail T-test performed on the mean pretest scores of completers and dropouts (both sites combined) showed no significant differences between completers and dropouts on either pretest.

D. Conclusions (Findings)

1. Adult non-readers and unskilled readers become more enthused about learning to read and to write by their experiences with computers and word processors as provided by the PALS program.

2. Adult learners are motivated and rewarded by the keyboard-word processing work that they do at the start and throughout the instructional process. Printouts of their work gives them a sense of success and "producing" from the outset.

3. Adult learners are encouraged and rewarded by the process of writing and typing their own stories in the second half of the instructional cycle. Many make two prints and take one with them to display.

4. Learners' need for the teacher is crucial and constant. Students vary in levels of sophistication or amounts of success, but this doesn't diminish the importance of the teacher. The functions of the instructor change as learners become more competent, but the need for the instructor does not diminish.

5. The teacher must be a trained professional, knowledgeable about adults as learners and special learning problems, skilled at motivating and rewarding, and in command of basic teaching and technology skills.

6. The teacher plays a vital role in determining the impact of the PALS experience on the self-images of students.

7. The learners at both sites showed reading gains which can be attributed to the PALS program; sometimes gains of as much as 2-3 levels occurred in 100 instructional hours.

8. Women appear to do better than men in the PALS program.

9. There was no relationship between reading level at the time of enrollment and the tendency to drop out or complete the program.

10. The PALS program motivates students to read, that is, produces a desire in them to read more (outside of the program itself).

11. Erratic attendance is a primary factor in students having limited successes.

12. The most common factor associated with dropping out is employment (new employment, changing work conditions, etc.).

13. The currently available reading progress measures (tests) are not adequate for purposes of this study. Test results often do not measure progress evidenced with other indicators of student growth.

CONTEXT

The PALS system provides multisensory stimuli and reinforcement to learners. The system makes extensive use of video screens, a medium with which non-readers are comfortable. The comic book format uses illustrations in color to provide context clues and identify speakers and settings for the text. The content of the reading material illustrates the ways written language, when it replaces much less precise pictographs, eliminates an impending war and entraps the plotters perpetrating it. The system uses a medium familiar to the learners, uses the visuals with aural reinforcement, meets the social needs of learners by expecting them to work with partners, teach keyboard skills and later teaches composition skills, provides neatly printed and correct printouts of learner work, provides instant feedback on typing errors so that errors are not practiced, and provides timed challenges to develop typing skills. Facilitated by a sensitive supportive teacher knowlegeable in adult learning, the PALS system creates an effective environment for adults to learn or to strengthen many communication skills.

DOING CASE STUDY RESEARCH IN ADULT EDUCATION

Sharan B. Merriam, Professor, University of Georgia

Abstract: A case study approach is often the most appropriate research design for investigating problems and questions that emerge from practice. Discussed is the nature of case study research, followed by the steps in the process of conducting a case study.

Case Study as a Research Design

A research design is similar to an architectural blueprint. It is a plan for assembling, organizing, and integrating information (data), and it results in a specific end product (research findings). The selection of a particular design is determined by how the problem is shaped, by the questions raised, and by the type of end product desired. Case study, which is a form of descriptive research, is undertaken when description and explanation (rather than prediction based on cause and effect) are sought, when it is not possible or feasible to manipulate the potential causes of behavior, and when variables are not easily identifiable or are too embedded in the phenomenon to be extracted for study.

A case study is an examination of a particular phenomenon such as a program, an event, a person, a process, an institution, or a social group. The case is a clearly delineated bounded system (Smith, 1978). It is an instance of a larger concern, issue, or problem. For example, if one were interested in the process of planning a company training program, one would select a particular instance of program planning to study in depth. A case might also be slected because it is in and of itself intrinsically interesting, and one would study it to achieve as full an understanding of the phenomenon as possible.

Several writers have advanced definitions of case study. Wilson (1979, p. 448) conceptualizes the case study as a process "which tries to describe and analyze some entity in qualitative, complex and comprehensive terms not infrequently as it unfolds over a period of time." MacDonald and Walker's (1975, p. 2) definition of a case study as "the examination of an instance in action" is congruent with Guba and Lincoln's (1981, p. 371) statement that the purpose is "to reveal the properties of the class to which the instance being studied belongs." Becker (1968, p. 233) defines the purposes of a case study as two-fold: "to arrive at a comprehensive understanding of the groups under study," and "to develop general theoretical statements about regularities in social structure and process." The case study can be further defined by its special features or characteristics. The following four characteristics are essential in defining a case study from a qualitative perspective:

1) particularistic - Case studies focus upon a particular situation, event, program, or phenomenon. The case is important

in and of itself for what it reveals about the phenomenon, and for what it might represent. This specificity of focus makes it an especially good design for problems of an applied nature, for questions, situations, or puzzling occurrences arising from everyday practice. Case studies "concentrate attention on the way particular groups of people confront specific problems, taking a holistic view of the situation. They are problem centered, small scale, entrepreneurial endeavors" (Shaw, 1978, p. 2)

2) descriptive - The end product of a case study is a rich, "thick" description of the phenomenon under study. Case studies include as many variables as possible and portray the interaction of these variables often over time. Case studies can thus be longitudinal in nature. They have also been labeled "holistic," "lifelike," "grounded," and "exploratory." The description is usually qualitative; that is, instead of reporting findings in numerical data, "case studies use prose and literary techniques to describe, ellicit images, and analyze situations...They present documentation of events, quotes, samples and artifacts" (Wilson, 1979, p. 448).

3) heuristic - Case studies illuminate the reader's understanding of the phenomenon under study. They can bring about the discovery of new meaning, extend the reader's experience, and/or confirm what is known. "Previously unknown relationships and variables can be expected to emerge from case studies leading to a rethinking of the phenomenon being studied. Insights into how things get to be the way they are can be expected to result from case studies" (Stake, 1981, p. 47).

4) inductive - For the most part, case studies rely upon inductive reasoning. Generalizations, concepts, or hypotheses emerge from an examination of data - data grounded in the context itself. Occasionally one may have tentative, working hypotheses or expectations at the outset of a case study, but these are subject to reformulation as the study proceeds. Discovery of new relationships/concepts/understandings, rather than verifications of pre-determined hypotheses characterizes qualitative case studies.

In defining a phenomenon such as a case study, it is helpful to point out what it is not. Case study research is not the same as case work, case method, case history, or case record. Case work denotes procedures that involve diagnosis of social maladjustment. Case method is an instructional technique whereby the major ingredients of a case study are presented to students for illustrative purposes or problem-solving experiences. Case history, the tracing of a person, group, or institution's past, is sometimes part of a case study. In medicine and social work, case histories, also called case records, are used in much the same sense as case work - to facilitate service to the client.

Types of Case Studies

Case study research in adult education seeks to explore and understand specific issues and problems of practice. In so doing, case studies in education often draw upon other disciplines such as anthropology, history, sociology, and psychology for both theoretical orientation, and for techniques of data collection and analysis. From anthropology we have ethnographic case studies distinquished by the sociocultural analysis of the unit of study. Fingeret's (1981) study of the exchange network of illiterate adults takes into account sociocultural factors. Historical case studies employ research techniques common to historiography, in particular, the use of primary source material. Historical case studies tend to be descriptions of institutions, programs, and practices as they have evolved over time. A third type of case study employes constructs, theories, and/or measurement techniques from psychology in investigating educational problems. The focus on single individuals as a way to investigate some aspect of human behavior is what characterizes the psychological case study. In adult eduation, a case study of an individual, program, event, or process might well be informed by a psychological construct or theory. For example, a case study of an elderly learner might draw upon Piaget's theory of cognitive development, or research on behavior change might inform a case study of a patient education program. Case studies in education might also draw upon theory and technique from sociology. Rather than focusing upon an individual as in a psychological orientation, or on culture as in an anthropological study, sociological case studies attend to the constructs of society and socialization in studying educational phenomenon. Driessen and Pyfer's (1975) case study of adult basic education learners is from the perspective of the impact of setting upon the teaching-learning transaction.

Another way to classify types of case studies is in terms of the nature of the end product. Some are descriptive, others are more interpretive, and still others are evaluative. A case study which is descriptive is one that presents a detailed account of the phenomenon under study. Descriptive case studies are atheoretical. "They are neither guided by established or hypothesized generalizations nor motivated by a desire to formulate general hypotheses" (Lijphart, 1971, p. 681). Interpretive case studies also contain rich, thick description. These descriptive data, however, are used to generate conceptual categories or to illustrate, support, or challenge theoretical assumptions. The level of abstraction and conceptualization in interpretive case studies may vary from suggesting relationships among variables, to developing hypotheses, to constructing theory. Because of the greater amount of analysis in interpretive case studies, some sources label these case studies "analytical." Evaluative case studies involve description, explanation, and judgment. Case study evaluation of educational issues, or ethnographic evaluations, as they are also called, became "extremely popular in the late 1970's" and have been "the genesis of much educative and basic research since then" (Goetz and LeCompte, 1984, p. 30).

Conducting Case Study Research

Case study research typically begins with a problem identified from practice from which broadly phrased questions are raised. Questions about process - why or how something happens - commonly guide case study research as do questions of meaning and understanding. The unit of analysis, or "the case" must be defined. The case can be an individual, a program, an institution, a group, an event, a concept. The key issue in determining the unit of analysis or instance to be focused upon, is to decide "what it is you want to be able to say something about at the end of the study" (Patton, 1980, p. 100). For example, one of the most perplexing problems in adult basic education classes is the high attrition rate. Several questions related to this problem would be appropriate for a case study investigation. Does one want to be able to say something about an individual's experience in leaving the program? Or about certain program variables that might affect attrition? Or the total program?

The focus of research in a case study is on one unit of analysis. There may be numerous events, participants, or phases of a process subsumed under the unit. The case can be as varied as a single classroom, a system-wide GED program, an individual teacher, a patient education clinic at a local hospital. It is likely that within any case there exist numerous sites that could be visited, events or activities that could be observed, people who could be interviewed, and documents that could be read. The investigator thus needs to select a sample of what, when, where, and whom to observe and/or interview. In qualitative case studies, the most appropriate sampling strategy is nonprobability sampling, the most common form of which is called purposive or purposeful. Purposive sampling is based on the assumption that one wants to discover, understand, or gain insight; therefore one needs to select a sample from which one can learn the most. If sampling is an on-going activity concurrent with data collection and analysis, it is called theoretical sampling (Glaser and Struass, 1967).

Once the unit of analysis or "the case" has been defined and a strategy for determining who and what to observe has been decided upon, data for the case study can be collected. The primary sources of data are interviews, observations, and documents. These data are qualitative in nature and are used to build the intensive, thick description of a case study. Quantitative data from surveys or other instruments can be used in support of findings from qualitative data.

In conducting a qualitative case study, data collection and data analysis are simultaneous activities. Analysis begins with the first interview, the first observation, the first document read. Emerging insights, hunches, and tentative hypotheses direct the next phase of data collection which in turn leads to refinement or reformulation of one's questions, and so on. It is an interactive process, throughout which the investigator is concerned with producing believable and trustworthy findings.

Unlike experimental designs where factors affecting validity and reliability are accounted for prior to carrying out the investigation, rigor in qualitative case study is a function of the researcher's presence, the nature of the interaction between researcher and participants, the triangulation of data, the interpretation of perceptions, and rich, thick description.

Several levels of analysis and interpretation are possible in case study research. Indeed, some case studies are little more than case records in that they are basically descriptive accounts of the phenomenon under study and contain little analysis or interpretaiton of the data. The material may even be presented according to the topics or categories used to collect the raw data. What makes them case studies is the narrative structure used to present the data. At the most basic level, data are organized chronologically or sometimes topically and presented in a narrative which is largely, if not wholly descriptive. Moving from a concrete description of observable data to a somewhat more abstract level involves using concepts to describe phenomenon. This is the process of systematically classifying data into some sort of schema consisting of categories, themes, or typological constructs. The categories describe, but to some extent also interpret the data. A third level of analysis involves the making of inferences and generating theory. It is a process, Miles and Huberman (1984, p. 228) write, of moving "up from the empirical trenches to a more conceptual overview of the landscape." A detailed strategy for developing theory can be found in Glaser and Strauss (1967).

Once data have been collected and analyzed, an important task still remains - that of writing the case report. "The point where rich data, careful analysis and lofty ideas meet the iron discipline of writing" is "one of the great problem areas" for this type of research (Woods, 1985, p. 104). There is no standard format to follow in writing a case study report. Perhaps the most troublesome issue in writing a case study report is determining the right combination of description and analysis; the literature reveals differing opinions concerning the proper balance. Some feel the report should be largely descriptive leaving the reader to interpret the findings, and others call for a report that is heavily analytical. No case study report should be all empirical data or all theoretical analysis. It is the mixture which will convey to the reader the researcher's interpretation of the case and the basis for the particular interpretation. Keeping in mind the potential audience for the case report will help in establishing an appropriate balance between description and analysis. Wilson suggests that the logic of writing a case study needs to "match the logic of usefulness to the reader" (1979, p. 450). Other questions in writing the case report have to do with the placement of references to previous research and literature, the methodology section, and visual displays.

In summary, case study research in adult education offers a methodological alternative to more traditional experimental or quasi-experimental designs. Case studies are particularly suited to investigating problems related to processes and dynamics of adult education practice. A clear understanding of what constitutes a case study investigation, including defining the case, selecting a sample, collecting data, analyzing data, and writing the case study report is a prerequisite to this type of research.

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TRANSFORMATION THEORY

Jack Mezirow

This paper adumbrates a theory of adult learning, development and education in which the construal of meaning is of central importance. A fundamental distinction is made between instrumental and communicative learning. Uncritically assimilated meaning structures which determine what and how we learn may be changed through critical reflection. In communicating, meaning is validated through critical discourse. The conditions for critical discourse provide criteria for social and educational objectives.

We learn by making meaning of our experience. Learning may be best understood as the process of construing and appropriating a new or revised interpretation of the meaning of one's experience as a guide to decision and action. Meaning is central to learning. The major learning theories which deal either with the functioning of stimulus-response associations or the encoding, storage and retrieval of information fail to recognize this. As a result, they have had limited utility for professionals. Transformation theory is an emerging alternative paradigm of adult learning and development with clear philosophic and practice implications for adult educators. Habermas' (1984, 87) theory of communicative action provides the social theoretical context and serves as a heuristic for transformation theory.

The Structure of Meaning

Experience is construed through culturally assimilated meaning schemes and perspectives which constitute the "boundary structures" for perceiving and comprehending new data. Meaning schemes ("schema") are sets of related and habitual expectations governing if-then, cause-effect and category relationships as well as event sequences, goal orientations and prototypes. Meaning schemes are rules and principles of strategy. A meaning perspective is an orienting frame of reference made up of sets of schemes, theories, propositions, beliefs and evaluations. Both selectively order and delimit what we learn. They constitute our "horizons of expectation" which impact significantly on the activities of perceiving, comprehending and remembering meaning continually move back and forth between the parts and the whole of which we seek to understand, following the procedure described as the "hermeneutic circle."

We can and do reflect on both hypothetical-deductive and discursive-abductive processes of problem solving. But beyond reflection on the process of problem solving is critical reflection, which addresses the validity of taken-for-granted presuppositions. This is a neglected but crucial dimension of adult learning. Critical reflection in the domain of instrumental learning has to do with redefining, reframing or reposing the problem. In the domain of communicative learning, it has to do with reassessing the validity of epistemological, ideological and psychological assumptions upon which what is said and implied are based. This can also lead to reframing the problem.

Critical reflection has its own modal or inferential logic: it is dialectical-presuppositional. In this mode the interaction of meaning structures with experience results in transforming both. Educators of adults must also learn to design learning experiences predicated upon the discursive-abductive and dialectical-presuppositional models of problem solving. People learn different things in different ways.

Perspective Transformation

Although the transformation of meaning schemes is an everyday occurrence, the transformation of a meaning perspective is not. It can occur either through an accretion of transformed meaning schemes or in response to an externally imposed existential dilemma--a death, illness, separation or divorce, children leaving home, retirement, etc. One can have the disorienting dilemma evoked by an eye-opening discussion, book, poem or painting or by one's efforts to understand a different culture which contradicts one's taken-for-granted presuppositions. Perspective transformation is the process of becoming critically aware of how and why the structure of our presuppositions have come to constrain the way we perceive, understand and feel about our world; through a meaning reorganization reconstituting this structure to permit a more inclusive, discriminating and integrative perspective; and making decisions or otherwise acting upon these new understandings.

Perspective transformations can be personal, group or collective as in the civil rights, Vietnam protest and women's movements. Transformative learning involves cognitive, conative and affective dimensions. One can come to understand how an old way of seeing, understanding or feeling has been dependency-producing or otherwise unsatisfactory without being able to act upon this insight because action is too threatening. The process of personal transformation appears to often involve the following phases: (1) a disorienting dilemma; (2) self-examination with feelings of guilt or shame; (3) a critical assessment of epistemic or psycho-cultural presuppositions; (4) recognition that one's discontent and the process of transformation is shared; (5) exploring options for new roles, relationships and actions; (6) planning a course of action; (7) acquiring knowledge and skills for implementing one's plans; (8) provisional efforts to try new truthfulness of the person speaking or writing, further dialogue becomes aborted until we can reestablish the validity of what is being said. We can establish the validity of an assertion either by resorting to authority, tradition, brute force or to a rational assessment of evidence.

When what is being asserted or implied pertains to instrumental knowledge--learning to control or manipulate the environment or other people--the conditions under which an expressed idea is true may be determined by empirical test. When what is asserted or implied pertains to communicative knowledge--learning to understand what is being communicated which usually involves norm-governed concepts, judgments, propositions, beliefs, opinions or feelings--the conditions under which the assertion is valid is established through discourse with others who are informed, objective and rational in which we assess evidence and arguments and consensually arrive at a provisional best judgment about the justifiability of the idea. It is through this process of critical discourse that contested meanings are confirmed or negated.

Dewey (1933) defined reflective thought as "consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends." "Grounds" here refer to evidence by which the reliability and worth of a belief and its consequences could be established so as to justify its acceptance. Others have broadened this to include feelings as well as beliefs. Dewey dealt with reflection in the context of hypothetical-deductive problem solving. We reflect on the process--the representativeness of our sample, the warrant for our inferences, the logic, the inclusivity of anticipated consequences, the quality of evidence, the control of variables, the clarity of our analysis, the consistency of our actions with our values, etc. Dewey, Piaget and many others equated the hypothetical-deductive model of problem solving with the way adults think. The prevailing mode of structuring an educational experience is predicated upon this model.

Transformation theory holds that, as a modal or inferential logic implicit in problem solving, the hypothetical-deductive approach is relevant only to empirically validated instrumental learning. Learning what someone means is a different process which can be understood as involving a discursive-abductive model of problem solving. Abduction is a type of inference that yields a tentative explanation; one draws on one's experience to explain and that process suggests what to look for next.

The way we arrive at new meanings when confronting the unknown involves a process which can be characterized as context accretive. We begin with our partial insights to direct the way we collect additional data, comparing incidents, key concepts or words and relating them, often metaphorically, to our meaning schemes. When the properties of the experience do not fit, new schemes are created and the properties are integrated into them. Over time, the limited initial understanding becomes transformed as we come to discover its significance in other experiential, theoretical, literary or aesthetic meaning contexts. Each item of information is a building block of understanding and is clarified by the discovery of further building blocks of data. We within the context of communication. Experience strengthens and refines our structures of meaning by reinforcing our expectations about how things are supposed to be or requires new meaning schemes to provide coherence.

What we do and do not perceive, comprehend, feel and remember is determined by our meaning schemes and perspectives. We trade off perception and cognition for relief from the anxiety generated when the experience does not comfortably fit these meaning structures. When experience is too strange or threatening to the way we think or learn, we block it out or resort to psychological defense mechanisms to provide a more compatible interpretation.

The reason people with different perspectives can enter into rational critical discourse is because there is always some overlap between them in observations, concepts, problems or standards. We are not locked into Popper's "Myth of the Framework" which holds that when we are trapped into radically different perspectives communication is impossible.

Rather than storing long term memory, remembering may involve recognizing an event which previously has provided increased coherence to our then current meaning schemes or perspective. Perhaps we forget when the event is no longer salient due to either intervening learning or transformations in our habits of structured meaning. In this view, memory as one ages is not decremental but is subject to qualitative structural transformations toward greater selectivity, context awareness and a capacity for critical reflection.

Meaning schemes and perspectives are structures of largely unexamined presuppositions which often result in distorted views of reality; we get trapped by our own history. They are transformed through a critically reflective assessment of epistemological, ideological and psychological distortions acquired through the process of socialization in childhood. Epistemological distortions have to do with the nature and use of knowledge like believing that every problem has a correct solution or reifying a source of authority. Ideological distortions involve taking for granted belief systems, especially those currently predominant and legitimized and enforced by institutions. Psychological distortions have to do with repressed parental prohibitions which continue to influence in adulthood through anxiety feelings when we transgress. Transforming these structures of meaning is seen as the most significant "developmental task" of adulthood in a modern society.

The Process of Making Meaning

Rather than a psychological process or event, meaning is essentially and inherently linguistic. To understand the meaning of a sentence or any expressed idea, one must understand under what conditions it is true (in accord with what is) or valid (justifiable). In everyday dialogue we seldom question the truth or validity of what is said or written. When we come to challenge the comprehensibility, truth, appropriateness (in relation to social norms) or authenticity (in relation to feelings) in what is communicated or to challenge the roles; (9) building competence and self-confidence in new roles and relationships; and (10) a reintegration into society on the basis of conditions dictated by one's new perspective.

Implications for Adult Educators

From the perspective of transformation theory, adult development is understood as an adult's progressively enhanced capacity to engage in critically reflective discourse through which expressed ideas are validated. This definition recognizes that development in adulthood is both a function of a person's biography and his culture.

The very nature of human communications implies an ideal set of conditions for participating in critical discourse--that participants have accurate and complete information, that they are free from coercion and distorting self-deception, that they have the ability to become engaged in objectively weighing the evidence and assessing the arguments, that they are open to alternative perspectives, that they can be critically reflective of presuppositions and their consequences, that they have equality of opportunity to participate and have reciprocity in the roles assumed by participants in the discourse to challenge, question, refute, etc. Adult educators can find in the ideal a set of criteria for judging the value of every educational experience.

Adult education may be defined as the process of assisting those who are fulfilling adult roles to understand the meaning of their experience by participating more fully and freely in reflective and critical discourse to validate expressed ideas. The conditions for an ideal discourse provides the criteria for judging the authenticity of meaning perspectives. An authentic perspective is one which is more inclusive, discriminating and integrative of experience, is based upon full information, is free from coercion or distorting self deception, is open to other perspectives and points of view, is accepting of others as equal participants in discourse, is objective and rational in assessing contending arguments and evidence, is critically reflective of presuppositions and their sources and consequences and can accept an informed and rational consensus as the authority for adjudicating conflicting validity claims. An adult educators' task is to foster more authentic meaning perspectives by creating dialogic communities of learners with norms suggested by the conditions of ideal discourse.

Transformation theory calls for a reassessment of educational goals and objectives, needs assessment, instructional methods and forms of evaluation to recognize the significance of communicative competence, critical reflection and critical discourse in adult learning and development.

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INSIGHTS ON THE PROCESS OF INNOVATION IN URBAN EXTENSION PROGRAMS OF THE COOPERATIVE EXTENSION SERVICE

Martha Milk, MA, MPH
University of Minnesota doctoral candidate

(Research conducted through a grant of the Center for Urban and Regional Affairs, University of Minnesota)

Abstract: A three-part study using telephone interviews investigated innovation in urban extension. Issues of importance to urban extension were identified and innovation was defined. In the final phase, innovative agents described the following: the sources of innovation, barriers and support for innovative programs, the process of program development and recommendations for extension in the urban environment.

DESCRIPTION OF THE STUDY

An advisory council of extension agents and extension faculty requested that someone from outside of extension investigate innovation in urban extension. The study was divided into three separate phases. In the first phase of the study the objective was to gain an understanding of the work of extension in urban areas. In the second phase the objective was to define the meaning of innovative programming as urban extension staff understand it. In the third phase the goal was to identify the components in the process of innovative program development.

All three phases of the study involved telephone interviews. In the first phase, eight persons identified as national leaders in extension and adult education participated in fifteen-minute interviews. In the second phase fourteen extension regional or county directors were interviewed for an average of thirty minutes each. In the third phase fourteen agents responsible for developing or coordinating innovative urban extension programs were interviewed in telephone interviews of approximately one hour in duration.

ANALYSIS OF INTERVIEW RESPONSES

In the first phase the comments of the eight national leaders were compared to issues raised by several unpublished extension reports about urban extension. The same concerns were evident. Extension personnel are concerned about the role of extension in the urban environment, the image of extension in urban areas, the extent of its visibility in its urban areas, it's political base in urban areas, and how extension must change to serve the urban audiences.

In the second phase of the study insight was gained as to the depth and breadth of urban extension programs. Over forty innovative programs were identified. These programs were in such traditional areas as home economics, horticulture and 4-H. Non-traditional program areas were also identified.

Defining Innovation

One of the agents interviewed stated that, "there is a fine line between what is innovative and crackpot." Being innovative does mean being different and some people find that quite threatening. To some agents being innovative involves a struggle to redefine traditional programs and traditional ways of doing things in ways more suitable to urban audiences and urban environments.

Innovative programs in extension appear to have a number of common components. Most innovative programs involve cooperation with community agencies or other areas of extension. Innovation in urban environments appears to be a way of redefining or reshaping traditional approaches or programs to the needs and interests of urban audiences.

Why Is There Innovation in Extension?

The following are comments from agents in response to questions about innovation:

> "From day one since I've been in extension, they've always wanted creativity...They means county, regional and state, although I'd say county and regional demand it more."
>
> "I think traditional audiences are demanding innovations and I think new audiences are demanding innovation."
>
> "I see innovation at every level. I see people who don't want to do anything different and people who do. Maybe in one area I'm willing to try to do something different and in another area I am not."
>
> "I think it does take decision makers in power who say that they want innovation. New ideas come out of local people, but in a climate that permits, encourages and supports new efforts."

It would seem that innovation is not something that just happens in extension. There are conscious decisions made by those in key positions to support and encourage innovation. Agents and directors reported the idea of innovation beginning even at the time of hiring of agents when some county boards insisted on asking agents if they saw themselves as innovative or creative. Others cited regional or local directors who had been instrumental in pushing for innovative projects. In Missouri visionary leadership almost twenty years ago was cited as responsible for some of today's innovative programs. Special innovative grant funds available in the past and in some states either through the State Extension Director's office or through 4-H foundations were cited as another signal that innovation was encouraged.

Another stated, "The key is your county director, your number one support person. Your second support is your county executive board--they typically take leadership from the director. Your third support is from your volunteers. If you can't get their backing for a new program you may never get it off the ground."

There are clearly differences from state to state and county to county in the type of boards and the relationship of specific extension staff to board members since there are different political structures and different size counties. Still the point to be understood is that there must be clearly stated support and encouragement of innovation if extension wishes it to occur.

The motivation for individual agents to be innovative was examined. In most cases it appears that individuals do not engage in innovative projects because they seek rewards or recognition. Agents mentioned the need to serve clients and to try to meet their clients' needs as one reason for being innovative. Others mentioned the challenge of trying to reach certain audiences of great concern to them or to the decision makers directly connected to them. It appears that some are innovative because it is personally challenging to them. One man, on finding himself in a unique position, strove to understand it within extension's framework. When he could not understand it within the existing framework he had to strive to redefine and get others to redefine the meaning of 4-H.

Background for innovation. Circumstances or history may affect the development of innovative programs. The work of other extension staff or the background of involvement in the community of the agent himself or herself may set the stage for an innovative event or program. Innovations build on prior achievements and programs. In most cases prior programs have established the legitimacy and credibility of the agency or the agent. Several of those interviewed were conscious of their roles in new programs in urban areas where extension had previously been unknown. They stated that they knew they were building a trust and a reputation that over time would lead to people identifying a program as a trustworthy one of quality.

Sources of innovation. Innovative ideas do come from a variety of sources. Innovations can be spurred from federal, state or district initiatives or mandates. Most of them, however, occur at the local level. Locally conceived innovations in this study came from five basic sources: (1) the extension board, (2) clients of extension, (3) community groups or agencies, (4) advisory councils of specific program areas (in 4-H and in home economics), and (5) from extension staff.

The Meaning of Innovation

Copa and Sandman discussed the practice of competent successful agents. One point mentioned by the agents they interviewed was the problem with getting so caught up in activities that agents lose sight of the larger picture.

A key to understanding much of the innovation in urban extension would be to examine in more detail the purpose behind innovations. Why should agents continually strive to develop new and innovative programs when there is little monetary support for them through extension? White and Brockett (Journal of Extension, Summer 1987) state that agents must ask why they are planning an activity before deciding on content or format. They make a strong argument for using philosophy as a tool to improve the effectiveness of practice within extension. They also cite from Apps about the adult educator's use of a working philosophy. White and Brockett state that the use of a working philosophy can enable extension agents to make choices with an eye towards the total picture of the institution and society, rather than relying merely on tradition.

For what philosophical reasons do extension agents pursue innovation? Extension does have in its mission statement that its purpose is to disseminate information to the public. That mission statement may have been the basis for the working philosophy of the agent who stated, " most of the competition tends to follow along after we do something. We start most of it, then somebody will take up on some of it."

Maintaining and Diffusing Innovative Programs

After the initial implementation of the innovative program is completed then the next step of innovation is entered. Programs are either continued or discontinued. Continuation may involved change and it may involve different administration or staff, different clients, and a different focus. The reasons for program continuation are related to things mentioned before, such as support and encouragement of innovation and how these innovations fit into the big picture. There are also barriers to innovation.

Barriers to program development.

Let us first examine some of the barriers to development and continuation of innovative programs. Major barriers mentioned by several of those interviewed have to do with how people perceive things. There are individual perceptions such as one person's fear of machines or fear of appearing ridiculous and thus afraid to appear on television.

"Some fear going beyond or doing or saying anything innovative or different--it's a matter of self confidence and fear of what we don't understand."

To others it's a matter of determination; a determination to not let obstacles get in the way of carrying out the initial plan. "The key to any of these projects is to go ahead and do them regardless of how many stumbling blocks you see ahead of you--just go ahead and try it, rather than seeing all the things that can't be done."

Another stated the perception barrier as one of the myths about extension. "The myth is that extension is not rigid. It is rigid. There is tremendous power and control and push for traditionalisms. There is flexibility in the mission statement, in the philosophy, in the methodology. People need to know how to take advantage of what allows them to do something different."

Barriers are related to perceptions, attitudes and also to how bureaucracies work. There are geographic barriers that have to do with county lines, and political barriers related to county and state lines, to hanging on to old traditions, and to measuring and evaluating programs along the lines of rural priorities rather than on the realities of urban life.

Program development support. Program support is often related to the same conditions as the barriers. Support may be motivated by politics, perceptions, relationships, attitudes, program priorities, and personalities. The level of initiative of a program may determine its support or continuation.

Programs initiated locally must, from the very beginning, struggle for funding and seek cooperation and help from other community agencies just to get off the ground. These programs usually tend to get only encouragement and moral support from local, regional, or state extension offices. Sometimes assistance is in the form of advice from a specialist, or help in developing or printing materials, but rarely does extension have funds for programs. A few states do have innovative grant funds which are small amounts of money available to start innovative programs.

Process of Program Development

After an analysis of the steps agents cited they followed in program development, networking, cooperating with others, and having a good knowledge of community resources emerged as the most important steps and skills for program development.

Copa and Sandman listed an acute sense of context as one of the qualities of exemplary extension agents. Astroth and Robbins (1986) listed six steps for increasing awareness of the function and mission of extension in all communities. The first two steps they cite are cooperation with fellow extension workers and cooperation with other community agencies. The innovative agents interviewed in this study clearly had an understanding of the steps important to sound program development in an urban environment.

CONCLUSIONS: DIRECTIONS FOR URBAN EXTENSION PROGRAMS

The agents interviewed in the third phase of this study have worked in the urban environment for a number of years and have an acute sense of the nature of the urban environment and a strong commitment to the needs of urban residents. Their recommendations for urban extension are summarized in the following three sections:

1. We must recognize that urban models have to be different than the rural and traditional models:

   "With so many other people around with talent and expertise, we have to be able to provide both uniqueness and effective outreach and educational savvy with adult learners."

   "If you would take that old community club structure, which a lot of people identify as 4-H, and plop it down in the middle of the city and say, alright now we start nothing but community clubs, it would not happen. We've tried it and it doesn't happen because urban people do not recognize 4-H."

2. Through trial and error and experience they have discovered some models that do work with urban audiences:

   "What we tried to do in the last eleven years was to take existing 4-H materials and adapt them to an urban area."

   "We tried to put together short-term learning experiences that they like, where they are getting quality and where they can start to identify us and relate us to a good experience."

   "We said, we gotta meet these people where they are at, give them what they are looking for and show them that it is high quality."

   "One of the things that we try to do beyond cooperation with other extension services, but with other agencies here, is that we adjust our program because there are a lot of other agencies. We try not to reinvent the wheel. We get into something, perhaps as a member of an advisory board, rather than doing certain types of programming."

   "Our goal is for us to find the kind of learning that really excites the kids (rather than trying to recruit for 4-H clubs).

3. These agents have the experience and expertise in the urban community. Following are their recommendations for what extension can do to serve urban audiences:

   "We have a lot of competition for people's time, we have to offer them something of special interest and make it so high quality that they want more."

   "Gradually as we expose people and show that we are innovative in new areas, they will be able to perceive us as being able to provide in that area...then we must make key political people aware of what we are doing and show that we are a viable agency."

   "It's important that we change to try to meet the needs of city people."

Non-Traditional Technical Programs for Women: Barriers and Facilitators to Learning

Christine L. Persico

Abstract

Utilizing modified participant observations, group and individual interviews, this study sought to discover and describe the conditions which either facilitate or impede women's learning in non-traditional technical programs.

Problem

Since World War II women have entered the paid labor market in unprecedented numbers. Yet their participation is limited to but a few traditionally female, low paying jobs with little opportunity for advancement. Most women work in the paid labor force as waitresses, cosmetologists, secretaries, bank tellers, small-parts assemblers and manufacturing operatives; not as nurses, teachers or social workers.[1] By all accounts, the proportion of women in male intensive occupations has changed little since 1900. A 1986 U. S. Department of Labor publication, "20 Facts on Women Workers", reported that in 1985 women represented 80% of all administrative workers, but only 8% of all precision, craft, and repair workers. Women were 6.4% of all apprentices during 1985.

Educational enrollment statistics (by majors) are quite similar to employment statistics. A 1980 study of program enrollments at the two-year colleges within The State University of New York and The City University of New York revealed that men and women are concentrated in the majors which are stereotypic for their sex.[2] Results of the Graduate Alumni Survey[3] of the college for this study, indicate that women alumni from the Engineering Technology programs averaged $3,000 more in annual income than their traditional counterparts. While these economic figures are compelling on their own, women aspire to achieve in non-traditional (male-dominated) occupations for additional reasons. These include the desire to explore varied occupational options as well as to fulfill their potential and talents.

As reasons for choosing non-traditional occupations women most often cite the higher salaries, opportunities for advancement, and the potential to fulfill interests and utilize talents.[4] However, many barriers exist which impede women's entrance into these occupations. They include sex-role stereotypes, work-role stereotypes, discrimination in the labor market, and educational deficiencies in women's schooling experience.[5]

Few "second chance" programs exist for women who are interested in training for non-traditional occupations. Fewer still are guided by adult education principles or administered by avowed adult education practitioners. Non-traditional technical programs for women comprise an important but as yet little researched adult education activity. The purpose of this project was to discover and describe the conditions which facilitate or impede women's learning in non-traditional technical programs. The focus was both on what occurred within the educational context as well as within the women's relational networks.

Methodology

Employing guided observation, group and individual interviews, four programs were studied. Thirteen classes were observed and nineteen women were interviewed; sixteen in group interviews (four groups) and three in individual interviews. These programs were sponsored by The Division of Continuing Education of a northeast urban technical college. The commonalities among the programs were: 1. the curricula--all were intended to train students in the repair and maintenance of buildings, 2. the teachers and administrators--several teachers taught in more than one program and two administrators directed two programs each, and 3. the facilities and equipment were utilized by all of the programs. The programs differed by funding source, and most significantly in the composition of the student bodies. Three of the programs were "Women's Programs" serving exclusively female populations. The fourth was a coeducational male-dominated program into which a small core of women was recruited. This provided the basis for comparing the learning opportunities available to women in two distinct contexts.

The classroom observations were structured, utilizing a guide developed by this author. The guide is a compilation of behaviors found to affect women's learning, described by Roberta Hall (1982).[6] The guide focused on the classroom management behaviors of the instructors and the teacher-student as well as the student-student interactions. Non-verbal communication patterns were also assessed. Typical foci of the observations were: eye contact, body stance, organization of student work groups, tool distribution patterns, and name recognition. Verbal behaviors analyzed included: frequency of calling on and responding to male versus female students, use of unfamiliar terminology, lewd joking or comments and sexist comments.

Classroom observations were conducted in the format of modified participant observations. For each of the four programs involved all of the observations of that program were conducted prior to arranging the group and individual interviews. In this way, several class sessions were spent with each group enabling them to become acquainted with the researcher. Additionally, the results of observations generated new avenues for inquiry which were added to the interview guide.

The focus of the group and individual discussions was the students' perceptions regarding the effects of classroom interactions on their learning. Areas explored included: classroom experiences, assessments of program administration, the reactions of significant others to their participation in these programs, and their sense of themselves as learners.

Nineteen women participated in this study. They ranged in age from 19 to 56. The were single mothers on welfare seeking job training and middle-aged home owners hoping to become "do-it-yourselfers". They were high school drop-outs and college graduates. They were Black, Puerto Rican, Latin American, Italian, Chinese, Italian American and Irish American. Their years in the paid workforce ranged form none to twenty-three. Their incomes ranged from welfare to $28 thousand. Most had children. They were married, separated, divorced and single. While tremendously diverse demographically, they all had one thing in common: a fantastic drive to become educated and succeed at non-traditional jobs.

Rationale

The techniques employed for data collection were triangulated; that is three different kinds of data relevant to the same phenomena were sought by utilizing a variety of methods: modified participant observations, group interviews and individual interviews. Triangulation serves as a cross-validation among multiple data sources, research methods, and theoretical schemes.[7] Observation is usually done in conjunction with interviewing. Dobbert[8] notes that is useful as an aid to validate the perceptions of others. Guba and Lincoln[9] value observation as a technique which builds upon direct experiences; it records events and behavior as they occur. The value of group interviews is that they bring the researcher "into the world of the subjects".[10] When reflecting together, participants will often stimulate each other. As Hedges notes, "This often helps people to analyze their own attitudes, ideas, beliefs and behavior more penetratingly and more vividly than they could easily do if just done with the interviewer."[11] Knowledge and understanding are not created in vacuums; rather, they are developed through interaction with others. Since it was the women's collective perceptions which were sought, a methodology which could capture this collective process, the group interview, was employed.

Data

Field reports of observations and "word-for-word" transcripts of interviews served as the data sources. The collection, coding and analysis of data was a concurrent venture. Coded transcripts and observation reports were compared for like themes via the "cut-and-paste" method. This process yielded a rich body of data which illuminates the barriers which women face as students in non-traditional programs; the educational practices which facilitate their learning; the effects that their relationships with significant others had on their learning opportunities; and their sense of themselves as learners in non-traditional technical programs.

The classroom and administrative practices which were perceived by the women and observed by this researcher as barriers to learning can be classified into two broad categories: those pertaining to adult education practice in general, and those specifically related to the education of women. The "women's programs" as well as the male-dominated program failed to engage the students in the process of assessing their needs, interests and abilities. A failure generally in the process of ideal adult education, the lack of any needs assessments was particularly harmful to the women because assumptions were made about their knowledge base, as women and as a group. Interestingly, these assumptions were both positive and negative in that it was either assumed that they possessed a particular knowledge and skill base or that they lacked such a base. However, whether the assumptions were positive or negative they were harmful because curricula, methodology, and materials were designed without information about or input from the students. This led to the women assessing a great deal of the curricula as irrelevant and inappropriate. Anna represented the feelings of the women when she stated, "They have trouble with the class. What everybody should learn...They took it (course) out of the department and just plopped it here..." A problem for adult education in general, the students expressed the sense that their teachers knew their fields, but were not trained as teachers.

In addition to the irrelevance of the curricula, students were sensitive to the management of the classroom and learning experiences and the effect that it had on their learning. They identified these as barriers to their learning: a disorganized curricula and/or classroom atmosphere, lack of equipment and/or tools, insufficient time, large class size, inappropriate class composition and lack of rigor. While these factors would impede the learning opportunities of all students, the women were particularly affected by the unfair distribution of tools (men received instructors' preference) and the inadequate safety instruction and precautions. While safety is an issue for all students, as newcomers to power tools and equipment, women appear to be more concerned about the inclusion of safety in the curricula.

The learning climate that develops in any class is as dependent upon the the interactions amongst the students as it is the teacher's attempts to create a climate conducive to learning. Unfortunately, the women experienced aggression and competition , particularly from their male classmates. As women have been noted to seek harmonious and collaborative relationships[12], aggression and competition in the classroom serve as impediments to their learning.

Sexism, both subtle and blatant, was pervasive in the male-dominated program. It took the form of lewd jokes (excessive references to perforated and diseased balls in a plumbing class); sexist comments,"Why aren't you at home married and with kids?"; exclusion of the women from participating in discussions and from leading work groups; preferential distribution of tools to the men; body stance and visual communication by instructors which excluded the women from view and discouraged their participation; the challenging of the credentials of female instructors by the male students; and the extensive use of unfamiliar terminology which was not decoded for the women. These conditions created a climate which caused the women: to feel inhibited and reluctant to speak out; to "shy-away" from participating in discussions or raising questions; to be intimidated by aggression and competition; to be embarrassed by lewd jokes; and to search for ways to learn on their own and outside of the classroom.

Nonetheless, facilitating conditions were also found. While formal needs assessments were not conducted in any of the programs, teachers' sensitivity to students' needs was identified in two of the women's programs as well as in the male-dominated program. Both the emotional and physical environment are cited by adult educators as vital in the learning process. The importance of encouragement, freedom and flexibility, and seriousness about the program were perceived by the women as attributes of at least one teacher in all of the programs. They were particularly impressed by the respect that many of the teachers afforded them. The following adjectives were used to describe favorite teachers and were used in reference to both female and male instructors: well-organized, caring, patient, supportive, structured, demanding, concerned, responsive, clear, sincere, and enthusiastic. Teachers willing to share personal experiences were considered special. Teachers willing to behave as learners were greatly appreciated. The opportunity to have women teachers as role models was extremely important to the students. The female instructors were perceived as more supportive and patient and as sharing in the struggle to succeed in non-traditional occupations.

When referring to adult students, the literature emphasized the reactions of significant others as contributing to or hindering women's educational success. Significant others include: spouses, parents, siblings, children, friends, co-workers, clients or customers. The women in this study received reactions from family members that were mixed, but on balance, supportive; reactions from friends-men and women alike-that were positive and negative; and reactions from co-workers that were mainly hostile. Of these, the most disturbing were the negative reactions of female friends. The women expected that they would automatically support them. Their negativism was extremely disappointing.

Despite programmatic inadequacies and the discouraging behaviors of staff and students that emerged in these programs, the women completed the programs with a sense of pride, confidence, self-discovery and self-sufficiency. In addition, they overcame previously held fears about doing certain kinds of work and handling equipment and tools. Perhaps mastery of the very things one is socialized to believe impossible or inappropriate contributed to the women's heightened sense of competence which fueled levels of confidence and self-esteem. It seems that when presented with opportunities to achieve in ways here-to-fore denied women, that women gain a great deal. If one word were chosen to express how the women felt about themselves as learners of trades non-traditional for them, it would be "PROUD"!

Conclusion

Non-traditional technical programs for women could benefit from the practice of collaborative adult education processes. The assessment of students' needs could lead to curricula, methods and materials which are designed to be relevant to women as non-traditional students in technical programs. Staff development focused on the practice of effective adult education as well as the eradication of sexism and the creation of sex equity would enhance the ability of technical programs to serve women appropriately. Support services, varied, but particularly counseling, are required to assist women in responding to the negative and often hostile reactions of significant others. Extensive work is required to make non-traditional technical programs truly welcoming to women. Adult educators should be inspired by the challenge, armed with the knowledge that the rewards for women are so great.

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A KNOWLEDGE ACQUISITION METHOD FOR BUILDING EXPERT SYSTEMS: STUDYING ADULT REASONING AND THINKING

John M. Peters and Peter J. Lazzara
The University of Tennessee

ABSTRACT

This paper describes the development of a knowledge acquisition methodology for building expert systems and its application to studies of adult reasoning and thinking. Involved is a set of procedures for interviewing an expert and for analyzing the protocols for rules and domain knowledge. The simulation technique is intended to serve as a new experimental environment for studies in the area of adult reasoning and thinking.

INTRODUCTION

Three recent trends that have developed in recent years show promise of altering the way in which most research on reasoning and thinking is done. One trend is the increasing realization that much of what people do is determined by the peculiarities and particularities of the situations or contexts in which they find themselves. Another trend is found in studies of reasoning and thinking that place greater emphasis on what learners know, as opposed to the process by which they learn what they know. A third and most recent trend is the development of computer-based systems for modeling the ways which experts employ what they know in solving real problems. The development of "expert systems" software, the hallmark of the third trend, promises to serve as a new experimental environment for studies in adult reasoning. This paper describes a method for "acquiring knowledge" from experts in the interest of furthering the development of expert systems technology, and in the broader interest of stimulating new studies of adult reasoning and thinking.

EXPERT SYSTEMS

An expert system is a computer program that contains knowledge or "knowhow" that has been acquired from an expert in some domain. Such programs attempt to mimic the activity of the expert. To construct such a program it is necessary to acquire the knowledge from the expert and then put that knowledge in the special form that is required by the expert system. The knowledge is stored in the program as a set of rules. An expert system can exhibit a limited form of intelligence. The intelligence comes from automated deductive reasoning facilities that are built into the expert system. The deduction mechanism uses logic to deduce conclusions given the rules that are in the system. If an expert system is asked to "explain" its reasoning, it will display the sequence of deductions that it made to arrive at its conclusion.

As a very simple example, suppose you have the rule; IF it is raining, THEN get umbrella. If you are told it is raining you will automatically reach for your umbrella. You have a rule and a fact about the weather, from which you automatically deduce the correct thing to do. This is the process that is being simulated in an expert system.

To explore this a bit more deeply, you might have a rule for checking the weather, say; in order to decide what to wear in the morning, first check the weather. The rule about the umbrella depends on another rule, that is, that you check the weather to decide what to wear. Therefore, the umbrella rule may or may not apply, depending either on another rule or on some fact that you know about. An expert system will ordinarily have many rules, (called "production rules") that form chains of reasoning that the system may or may not explore, depending on the basic facts of the problem that are presented to it.

An expert relies on a mental representation of a problem domain that can be simulated by production rules in an expert system, and these rules are assumed to be implicit in the thinking of the expert. Thus, the open question is: How does the expert system developer access these rules? Knowledge acquisition happens to be one of the most problematic aspects of expert systems development (Olson and Rueter, 1987), and the method described in this paper is designed to help resolve that problem.

A METHOD FOR KNOWLEDGE ACQUISITION

The basic structure of the method is an interview-analyze-interview cycle. After an initial interview and analysis, subsequent interviews are guided by findings arising from the prior analysis cycle. Briefly, there is a preliminary interview which is analyzed and patterns of reasoning and rule structures are derived from this analysis. These patterns are used as a basis for inferring "hidden" premises (i.e., unspoken reasons) in arguments contained in the interviewee's protocol. Each subsequent interview directs the inquiry toward further reflection within areas relevant to those hidden premises that had been uncovered in the first analysis.

We call the method of protocol analysis a thematic reduction (The theoretical foundation for this method is found in Lazzara, 1985). We search the protocol text for thematic structures which are uncovered in an analysis of natural language elements contained in verbal accounts of problem solving actions. The important thematic level of a problem solving protocol is that of the reasoned explanations a person gives for what they are doing or did while solving a problem or doing a task. At this level, such themes represent the underlying reasons or thinking that drive problem solving behavior.

The thematic reduction has four stages called atomizing, categorizing, thematizing, and schematizing, or what is termed an "ACTS" analysis. In the first stage, the transcript is segmented into intended ideas, or "atoms." On the assumption that people rarely speak in complete sentences, are redundant, etc., an "atom" is often nothing more than a partial sentence that was completed or simplified. The decision about atomizing is based on the surrounding context of verbal accounts.

In the second stage (categorizing), each atom is placed into one of five natural language categories: beliefs, wants, norms, intentions and facts. In giving an argument for something, a person will speak in terms of what they believe, what they want, what norms they follow and what they conclude or intend to do, as well as citing factual information. In natural language then, these expressions comprise a built in category system. The categorization of atoms is the simple act of identifying an atom as belonging to one of these natural categories.

This list of categorized atoms is the data base from which the material for the third and fourth stages of the reduction is drawn. In the third stage (thematizing), each category of the data base is examined for natural and logical connections among those atoms that together form an argument or justification for some action.

In the final stage, the atoms making up an argument are linked together in the form of a diagram that displays the logical structure of the argument. After the interview is completely analyzed, the process can be repeated using the hidden premises as probes for further and more detailed reasoning about background assumptions.

This step is a structural analysis and focuses on the problem solver's reasons for the steps taken in the solution of the problem. This procedure is similar to Nolt's (1984) procedure for analyzing practical arguments, which involves diagramming the structure of complex arguments that characterize ordinary discourse, and uncovering both verbally expressed reasons and hidden premises, i.e., unspoken reasons for actions. The total set of structures is a model of the person's reasoning for that task. As discussed below, if the model is instantiated in an expert system we have a simulation of the person's reasoning.

The model is therefore composed of two primary elements: (1) a picture of the problem solving process that the person uses; and (2) a structured record of the person's accounting practices which consists of his/her rule system. The resulting model is, in essence, a depiction of the person's reasoning pattern applied to a specific problem situation. The natural language categories can, at one level, give us a picture of the content of reasons associated with an action. The diagramming process results in a picture of the structure of reasons. Taken together, the two provide a model of the adult as learner/thinker.

PROTOCOL ANALYSIS

The following section provides excerpts from an example protocol analysis. The ultimate goal of the analysis is the formulation of a set of "production rules" that can be used in an expert system. The subject is a job analyst who is comparing different methods of job analysis. The questioning is based upon simple direct probes of the process such as "tell me more" or "what happened next?" The interviewer is instructed not to lead the interviewee and to use reflective listening skills. As a first step in identifying atoms that will be used in the diagramming of arguments, the analyst brackets and numbers those elements of the transcript that correspond to either a step in the process or a reason for a step:

> Q. When doing a job analysis, you said that you like to get a catalogue of methods. What was the first step you took?

A. The first thing I did was to weight the criteria for a method that might be used for the analysis of this job.

Q. Tell me more about that.

A. [(1)What I was trying to do was identify the strengths and weaknesses of possible methods.] [(2)I had already developed my rating scales]. [(3)I needed to give a weighting] so that I could establish the importance of each criterion, because [(5)once you've done all that and have ((4)created a chart of the alternatives, criteria and weights), then you have identified the strengths and weaknesses.]

Q. Please tell me more about how you weighted the criteria.

A. What I did was make a subjective estimate of the importance and put it in a chart, where I could visually compare the elements to get a good feel for the overall picture.

The goal statement also constrains the selection and interpretation of the atoms. The goal statement used to structure this account is as follows: (numbers correspond to bracketed and numbered atoms above)

1. "I was trying to identify the strengths and weaknesses [of the different methods]."

This was a subgoal of the intention to develop a catalog of methods. (Note that there is more than one argument in this segment of the protocol) Therefore we want to identify the atoms that are relevant to the identification of strengths and weaknesses. From the second bracketed atom we get:

2. "I developed the rating scales"

and following this we get:

3. "I needed to give [the methods] a rating"

4. "[I created] a chart of the alternatives, criteria and weights."

The following paraphrase is the rule itself as stated by the interviewee:

5. "[If you do 2 + 3 + 4] then you have identified strengths and weaknesses."

The statement of the rule (when it is given) is a strong constraint on the interpretation of the atoms.

The schematic diagram of the argument would be as follows:

$$\begin{array}{c}\underline{2 + 3 + 4}\\ \downarrow\\ 1\end{array}$$

Statements two through four can be interpreted as "wants" and then be seen as a justification of the intention to identify strengths and weaknesses or they can be seen as requirements of the goal to identify strengths and weaknesses. In this case the interviewer would pick one of the intentions in the second argument analysis and go into more detail, and/or exploration of the atom: (A chart of estimates aids visualizations of results).

The next stage of the analysis requires that the diagrammed arguments be structured as if/then rules or "productions". The above diagramming has the advantage of exposing the structure of the argument so that it can be fully understood. Once the interpretation has been chosen, the same information is simply reformatted. So, the above analysis resolves into the following production rule:

IF you have developed rating scales AND
you have weighted the importance of each criterion AND
you have charted the alternatives, criteria, and weights
THEN you have identified the strengths and weaknesses

This is the production rule representation of one possible interpretation of the reasoning that was expressed in the transcript. This is the basic form that is used in the expert system. A model of the persons "reasoning" is present in the expert system as the collection of rules. This process is repeated until all goal and subgoal statements have been explicated in the above manner.

CONCLUSION

The knowledge acquisition method described above is a step in the direction of furthering development of expert systems technology suited to doing research in the area of adult reasoning and thinking. This is so because the method makes the point of view of the problem solver a central focus of study. The production rules derived from the analysis can be viewed either in terms of their function within the expert system or in terms of their function as an analysis of the structure and content of reasons that drive the problem solving activity. The interaction of a learner with a model of his or her own reasoning can become an important learning environment. This environment can in turn become a focus for study. The environment allows us to test predictions about the process being modeled while at the same time to study the interaction of the learner with the system. What is unique about expert system technology is that it offers the rigor of simulation needed in adult education research.

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THREE PERSPECTIVES ON TEACHER EFFECTIVENESS

Daniel D. Pratt

ABSTRACT

Teacher effectiveness is shown to be a function of:

1) Acquisition of skills and procedures;
2) Accommodation of contextual variations;
3) Critical reflection on knowledge and values.

Each perspective is examined separately, though it is acknowledged they are interdependent.

INTRODUCTION

Throughout history various metaphors and perspectives on teaching have guided research and defined exemplary practice. The most prevalent metaphor has been that of teacher as skilled manager and performer. From this perspective, teaching is seen as a set of skills and procedures to be acquired. Research on teaching has assumed a direct and significant relationship between teacher behaviour and student learning. Effectiveness has been defined in terms of the mastery of basic teaching skills and procedures which have been shown to correlate with student achievement.

A second perspective, most dominant during the past decade, compares teaching to problem-solving. Teachers are seen as constructing knowledge about teaching based on their existing cognitive schema. Research has sought to understand how novice and expert teachers use their knowledge of learners, context, and subject matter to derive appropriate teaching roles, functions, and strategies. Effectiveness is then a function of one's ability to solve complex, ambiguous, and often unpredictable teaching/learning problems.

Recently, a third perspective has arisen which focuses on the relationship between implicit and explicit values and teachers' thinking about what is taught and how it is taught. This perspective marks a shift in focus from skill development and problem solving to personal knowledge and beliefs, both implicit and explicit, that influence practice. It focuses on why teachers, given their experience and the evidence available to them, consider certain actions to be reasonable. The teacher's personal construction of knowledge is seen as happening within, and subject to, a larger set of factors that derive from personal and cultural values and implicit theories related to learning and teaching. Research has examined the links between teachers' subjectively held beliefs and their thinking. Effectiveness is seen as a form of critical awareness of the means and ends of one's teaching and the link between teaching and personal and cultural values.

PERSPECTIVE NO. ONE: Acquisition of skills and procedures

The first perspective, dominant since the 1950's and based largely on the promises of behavioural psychology, starts from the belief that there exists a universal set of teaching skills and principles that are applicable for the majority of learners across learning situations and which, if performed well, result in student learning. The most convincing body of literature to support this view comes from mastery learning (e.g., Bloom, 1984) and direct instruction (e.g., Rosenshine and Stevens, 1986).

Research that has taken this perspective, and from which much of the guidelines for effective teaching have emerged, has sought to answer the question, "What is the relationship between teacher performance and learner achievement?" The results suggest that a particular set of teaching skills and procedures are most suitable for the teaching of well-defined content which will remain relatively stable over time. These teaching skills and procedures are least appropriate when teaching content that is ill-structured or does not lend itself to a clear delineation of steps. (Rosenshine and Stevens, 1986)

Within this perspective, effective teaching is defined as mastery of the skills and procedures associated with an increase in student achievement This conception of effectiveness has problems. The belief that a set of behaviours constitute teaching suggests an uncritical examination of teaching skills, a bifurcation of thought and action, and a trivialization of teaching and learning. The essence of teaching, for some, lies not in the acts of teaching but in the interaction between thought and action (e.g., Clark and Peterson, 1986). By separating thought from action we separate the decision from the actor and assume a teacher can uncritically follow algorithms which will result in significant learning. The work of Marton et al (1984) points out the fallacy of this thinking and the shallowness of learning that can result.

If one takes only this perspective the inclination is to overlook the wisdom, insight, and tacit knowledge of good teachers and misrepresent teaching as mechanical procedures and routines. In the best of terms this would represent an approach to teaching that more resembles training than education, with an emphasis on how well a teacher has assimilated a set of skills and procedures which, though perhaps necessary, are hardly sufficient to handle the complexities of teaching and learning.

PERSPECTIVE NO. TWO: Accommodation of contextual variation

The second perspective on teacher effectiveness represents a shift from the uncritical acquisition of a set of teaching procedures to the accommodation of variations in context. The teacher is seen as clinical practitioner, moving within a complex, highly ambiguous and changing environment. Here, there is no separation of thought and action. Action is derived from intention or purpose and effectiveness is determined by a teacher's ability to interpret complex and diverse situations and derive rational strategies from that interpretation. Our focus shifts from the teacher's performance to his or her construing of teaching episodes and development of rational strategies.

The teacher's "craft knowledge" (Shulman, 1987) now becomes crucial to a conception of effectiveness. No algorithms for solving problems are sufficient. A teacher must use knowledge of subject matter, learners, institutions, objectives, and teaching methods to derive appropriate roles and the relative emphasis to be given to instructional functions. (Pratt, 1983) Each decision will be a product of the teacher's ethical, empirical, theoretical, and practical knowledge Thus, while the observable acts of teaching may look similar across situations, there may be considerable variation in the underlying processes which led to a decision to act in a particular way.

In this view of teaching, judgments about effectiveness must consider what was done (actions), rational for selecting certain actions (intentions), awareness of alternatives (craft knowledge), and results of actions (consequences). Variations in teacher effectiveness are related to a teacher's ability to predict common conceptions, misconceptions, difficulties, and motivational orientations (toward content) of entering students. In addition, effectiveness is related to a teacher's ability to transform or represent subject matter knowledge in forms and language appropriate to the learners. (Wilson et al, 1987)

PERSPECTIVE NO. THREE: Critical reflection on knowledge and values

Perspective number three marks another shift in conceptualizing effective teaching. Within this view professional knowledge of teachers is understood to be a combination of what they bring to the practice of teaching and something they construct through reflection-in-action (while teaching) and reflection-on-action (after teaching). Both types of reflection involve an attempt to create meaning from problematic moments in practice. Schon describes the process this way:

> In real world practice, problems do not present themselves to the practitioner as given. They must be constructed from the materials or problematic situations that are puzzling, troubling and uncertain... When we set the problem, we select what we will treat as the "things" of the situation, we set the boundaries of our attention to it, and we impose upon it a coherence which allows us to say what is wrong and in what directions the situation needs to be changed. Problem setting is a process in which, interactively, we name the things to which we will attend and frame the context in which we will attend to them. (1983, p. 40)

Problem setting and re-framing of puzzling situations are central tenets of the third perspective on effective teaching. However, reflection can occur within each perspective and, therefore, by itself, this aspect of teacher effectiveness does not differ significantly from Perspective No. Two.

A second tenet of this perspective is the critical examination of one's values as they effect professional practice, i.e., the consideration and clarification of the "taken-for-granteds" that lay beneath one's knowledge and beliefs about teaching and learning. Van Manen's (1977) third level of reflectivity applies here, i.e., to question one's moral, ethical, and political principles and make connections between one's practice and the wider social context. This level of reflection is inherent in Freire's (1972) conscientization movement. With regard to teaching and the education of teachers, Apple (1983) has been particularly critical of institutions which are

> ... moving toward greater stress on how to teach, not on providing justification for and skills in arguing about why educators teach particular information, skills and attitudes. (p. 322)

Here, concern is for the social conditions in which the process of teaching and learning are conducted and the relations of power and authority that structure and influence those conditions. Reflection is not seen as technique or skill but a way of being and a level of consciousness. Haltren (1987), in describing her work with students, gives her conception of reflection.

> Insights really occur when persons are freed up from the insecurity of not knowing so that the really meaningful questions can be asked. Also in questioning and putting ourselves in question, as well as putting forth our assumptions, it is most important to have insights to see what we believe and the courage, then, to say what we see. (Haltgren, 1987, p. 31)

Thus, within this third perspective technical skills, content knowledge, and "craft knowledge" are seen as embedded within conceptual and philosophical frameworks. It is the embedding frameworks that are the focus of reflection. A teacher's thoughts and behaviour, as well as the willingness to reflect on those thoughts and behaviour, develops out of, and make sense in relation to, a personally held system of beliefs, values, and principles.

Effectiveness is not assessed by placing someone's teaching against a set of objectively agreed upon standards but rather by clarifying the relationship between a particular set of values and beliefs and a teacher's intentions, actions, and judgment within a particular teaching context. For within this perspective, the ways in which a person sets problems and frames puzzling situations are intimately connected, not just to one's pedagogical or andragogical knowledge, but also to underlying and often implicit values that are acted upon unconsciously. The relationship between values and problem-framing is crucial to this perspective.

The outcome or result, from which we would assess effectiveness of teaching, has shifted from first order effects which are specific and observable (e.g., gain scores on achievement tests) to include second and third order effects -- ripples of learning that may be largely invisible from within the immediate teaching and learning situation. This would include an examination of the relationship between values, beliefs, and teaching practice and unintended as well as intended learning, and latent as well as immediate consequences. Lewis and Simon (1986) present an excellent example of this within a graduate seminar. Within adult education we would be concerned with, among others, the implicit and explicit messages people receive with regard to such issues as the need for education within an aging society, the role of lifelong learning within the professions, the kinds of relationships that are most constructive for learning, and the effect of one's values on the conduct of education and facilitation of learning.

CONCLUDING THOUGHTS

While all three perspectives have their place in research and practice there are circumstances which suggest emphasizing one or another. For example, with novice teachers or postulants (people with experience in a content area that now wish to teach that content) it seems appropriate to emphasize unambiguous guidelines, skills, and procedures. These may be necessary for survival in the initial phases of a teaching career. Later in one's career, when there is a base of experience upon which to draw, the relative emphasis may shift with an increasing focus on deriving appropriate roles and functions from variations in context. Finally, for highly experienced and confident teachers, the balance may shift further to emphasize the relationship between values and professional practice.

In any case, there should be only a shift in relative emphasis, not the exclusive presentation of one perspective on teacher effectiveness. For, as one considers contextual variation there may be a need to revisit basic skills. And, as one examines personal values, there may be a change in how one derives meaning from variations in context. Indeed, movement through the perspectives should increase one's awareness of the relationship between perspectives, suggesting that a more appropriate conceptualization of teacher effectiveness would be one that acknowledges the embedded interdependence of all three perspectives.

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AN EXAMINATION OF SIMILARITIES: WOMEN'S STUDIES AND ADULT EDUCATION

Jean Saul Rannells, Assistant Professor
Texas Woman's University

ABSTRACT: The teaching/learning methodology of Women's Studies emphasizes collaborative teaching, social action, and the value women's experience. These suggest similarities with the principles of Adult Education. In addition the gender-specific curriculum of women's studies offers adult education a source of experience and knowledge of women's educational needs and possibilities.

A Personal Perspective on the Problem

Before I began graduate school I worked with women in volunteer educational settings. I was amazed as I watched the dedication with which they went about their tasks and the energy and empowerment that came as they worked and learned. These women also worked successfully with men in other segments of the organization; yet it was in the women's organization that their personal growth and accomplishment flourished. I too felt this. With the women's group I felt accepted and cared for; my talents were encouraged even when I felt I had few. When we worked together it was as if being friends made the work and learning all the more powerful. With the women-men groups, the work was also successful; yet the atmosphere was competitive. The men listened and talked mostly to men. There was a suspicion of women's ideas and leadership. The work was not as enjoyable nor as empowering.

Reflecting upon this I identified three significant elements: (1) A women-only group was empowering, (2) self-actualization accompanied learning, (3) the transformation of self and society was accomplished through intentional actions. What was happening for women in the teaching/learning encounter?

Background

Women's Studies is the academic discipline concerned with curriculum issues about, with, and for women in higher education. In the late 1960's courses were designed to "facilitate more reflection on female experience and female aspiration" (Boxer, 1982, p. 663). Since women did not have equal assess to the resources of our society - power, career advancement, history, etc. - scholars wanted "to expose and redress the oppression of women" (Boxer, p. 667). Florence Howe, one of the early proponents of Women's Studies, states that such goals are "appropriate for liberal education [because] it is interdisciplinary and unifying, teaches skills in critical analysis, it assumes a problem-solving stance, it clarifies the issue of value judgment in education, and it promotes socially useful ends" (Boxer, 1982, p. 681). When information about women - their ideas, developmental processes, history - is not known and shared, higher education has only partial knowledge about the world and society, only partial truth. Grounded in the women's movement, Women's Studies is an educational strategy for change, for the liberation of women (Westcott, 1983, p. 210).

Nancy Schniedewind (1983) identifies five processes of feminist teaching: (a) development of an atmosphere of mutual respect, trust, and community in the classroom; (b) shared leadership; (c) cooperative structures; (d) integration of cognitive and affective learning; and (e) action. Here "process" is a key word; the teaching/learning transaction is a process in women's studies, as it is in adult education, enabling women to accomplish the growth and action goals needed.

These concepts also are similar to "principles of adult education." Adult education stresses the role of the learner's experience, the interaction of developmental tasks and learning, collaborative learning, the interdisciplary nature of adult education, the transformation that often accompanies effective learning/teaching, and the necessity of social action. One difference appears to be the gender-specific orientation of women's studies literature.

Method

The research reported here began with the assumption that certain similarities existed between the aims and processes of adult education and women's studies and that an examination of these would benefit practitioners of both disciplines. I decided to focus on the teaching/learning transaction which is central to both areas of study. I wanted to know how learning experiences were perceived by women's studies faculty and students. Two sources are available for answers to these concerns: women's studies literature and women's experience as teachers and as learners. Three phases comprised the project: (1) content analysis of women's studies literature to determine basic principles of feminist teaching, (2) construction and use of an instrument to measure women's perceptions of their learning experiences. (3) in-depth interviews with women enrolled in college level courses. Phases one and two are reported here.

Phase One: Womens Studies Teaching/Learning Themes

The content analysis proceeded in the following manner. Ninety-five articles and book chapters related to women's studies and feminist teaching were read. Three questions were asked throughout the reading:

What is essential for a feminist learning experience?
What is unique about a feminist class?
What happens in a women's studies class?"

Four themes were identified: (a) women-centered curriculum, (b) integration of experience, feelings and theory, (c) multidisciplinary and collaborative teaching and learning, (d) teaching for transformation. Each will be discussed.

Integration of experience, feelings and theory. The class is safe, nurturing and encourages openness (Davis, 1983). Feminism values both the intellectual and emotional capabilities and aspects of being (Schniedewind, 1983). Class discussions balance personal perceptions, theory and research fostering the integration of ideas and behavior, thoughts and feelings (Lord, 1982). Critical thinking is developed; students are encouraged to question and examine assumptions behind actions (Bunch, 1983). Diversity is valued. The teacher often becomes a "translator" of perspectives so that the variety of opinions and experience can be expressed and understood (Maher, 1985; Davis, 1983). Often the students consider the dynamics of the group itself so that they can use the setting as a laboratory for understanding and trying out new behaviors in discussion (Schniedewind, 1983).

Multidisciplinary and collaborative. The multidisciplinary, collaborative, interactive approach to study allows women to search for shared meanings and explore interlocking and evolving views of reality (Maher, 1985). All of knowledge is available for appropriation and analysis (Higgins, 1982). Teachers and students both have skills and responsibilities for exploring and expressing new perspectives; for teaching and learning. Feminist teacher and student engage cooperatively and collaboratively in the development of sharing knowledge (Lord, 1982). The teacher strives to minimize the hierarchical structure of learning to increase the student's own authority and acceptance of self-determination in the learning situatiion (Friedman, 1985; Higgins, 1982).

Teaching for transformation. Transformation - personal and social - is implicit in the feminist perspective (Higgins, 1982; Schniedewind, 1983). Students understand and obtain the attitudes, abilities and tools that they need to reshape the institutions and values (of themselves) and of the world (Bunch & Powell, 1983). Women will be empowered in all aspects as a first step toward social transformation. As women move from feelings of oppression and invisibility they themselves are change and are empowered to share the new knowledge with others through social action projects. Women's studies is consciousness raising (Bricker-Jenkins & Hooyman, 1987; Higgins, 1982).

Women-centered curriculum. Women are seen as the norm (Lord, 1982). Women's experience is valued as a primary base of knowledge (Culley, 1985). Knowledge of women (achievements, attitudes, needs, development and learning) are discovered and shared (Howe, 1983). Women scholars are used as role models - authors, teachers, case studies (Zimmerman, 1983). All subject areas are examined for their impact upon women and the contributions to the discipline made by women (Spender, 1980). Women actively create women-centered knowledge which includes (1) blending theory and practice and (2) support and joy for one another in the recovery of women's past and women's culture (Davis, 1985).

Adult Education and Women's Studies

It is tempting to want to expound on the adult education theorists whose work is closely related to that of women's studies educators; this is not practical in the space remaining. I hope however the reader will recognize the similarities with this brief mention.

Knowles (1970) - the assumptions upon which andragogy is based, climate setting in the classroom.
Brookfield (1985) - aims of adult education, including nurtuing of self directed and empowered adults and developing critical reflection.
Freire (1968) - the aspects of consciousness raising in the oppressed and empowering them for action.
Conti (1985) and others - the value of collaborative teaching and learning.
Mezirow (1978) - the notions of meaning perspectives and perspective transformation.
Liberal education philosophy - the primacy of the whole individual and the social context of the individual.
Humanistic psychology and philosophy - self-actualization.

While these may seem like just good teaching techniques and attitudes to experienced adult educators, we know they are not widely used in higher education settings. These methods and attitudes are appropriate, necessary and successful in women's studies classrooms because of the unique needs of adult women in higher education. Women need increased self-esteem and confidence in both writing and speaking skills. They need to identify with and to reclaim the history of women as scholars, activists, politicians, and ordinary women who have made a difference in the world (Porter, 1982). They need to see their ability to build and maintain relationships as a strength that is needed to shape our world for peace and justice (Miller, 1976). They need to learn and utilize skills for changing the sexist, hierarcical nature of our society. A women-centered curriculum is imperative if women are to counteract the "chilly climate" for women in the higher education classroom as documented by Hall and Sandler (1982).

Phase Two: Women's Experience

The next logical step was to ask whether such teaching/learning methods are observed in classrooms. Do women experience the occurrence of women's studies and/or adult education principles in their classrooms? To investigate this question a questionnaire was created. Twenty-six questions were developed from the four themes identified in the content analysis of women's studies literature. Questions were in a Likert Scale form to be answered by students. An existing instrument which measured adherence by educators to principles of adult education was located. Twenty questions on Conti's (1982) Principles of

Adult Learning Scale (PALS) were rewritten to be answered from the learner's perspective.

Fourteen women's studies professors were asked to comment on the construct validity of the questionniare. Eight responded. Eighteen items were identified at least once as not necessarily congruent to women's studies teaching methods. Of these items, thirteen were questions from PALS. Three questions were identified once; three questions, twice; five questions, three times; two questions, four times. Items receiving the most "votes" dealt with criteria for student evaluation, student-setting of course goals, individual conferences to establish student needs, relationship of course goals to daily life problems, timing of completion of assignments. Written comments indicated that these often were impractical in a higher education institution.

The instrument was pilot tested with a women's studies class in a large midwestern university. Preliminary analysis indicates the students did identify the principles of women's studies and adult education as being present in their women's studies courses. Additional analysis is underway.

Conclusion

If it is true, as Langland and Gove (1981) suggest, that "women and women's experience are fundamental to the development and vitality of every discipline" (p.6), adult education would profit from an examination of the discipline from the perspecitve of women's experience. In addition, if women's learning needs are to be met in educational settings, educators must know how these experiences are perceived by women. Factors of the "learning experience" that most contribute to women's learning have not been investigated (Mezirow, 1978; Maher, 1985). In fact, much of traditional research has viewed education from a masculine perspective, ignoring and diminishing the particular experience of women in all areas of the educational process (Maher, 1985; Langdon & Gove, 1981).

This research builds upon the experience of women students and women's studies faculty. Educators of both fields of study espouse collaborative learning, the value of the learner's experience and education for change. Women's studies appears not to stress the processes of learner participation in evaluation; adult education does not emphasize women-centered curriculum. At this point in our history the gender-specific orientation of women's studies is a valuable resource for educational research and theory. The challenge for us is to evaluate our practice from the view of women and women's experience in our classes. How are the centuries of women's lives, accomplishments, learning, and teaching honored and shared in the field of adult education?

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Learning and Coping Strategies Used by Learning Disabled Students in Adult Basic Education and Literacy Programs

Jovita Martin Ross
Pennsylvania State University

Abstract

Interviews were conducted with 19 adults known or suspected to have specific learning disabilities. Discussed here are their motivations for participating in adult basic education or literacy programs, perceived learning strengths, and coping and learning strategies for reading and writing tasks.

Statement of the Problem

In recent years literature on adult basic education has indicated a growing awareness of the presence in adult basic education programs of adults with specific learning disabilities (Bowren, 1981; Gold, 1981; Thistlewaite, 1983). Adult educators involved with adult basic education programs and literacy councils seek both appropriate means of identifying such students and effective instructional strategies.

The actual incidence of learning disabled adults in the adult basic education classroom is unknown, although it has been estimated to be as high as 80% (Travis, 1979). Follow-up studies of LD children provide sufficient evidence to suggest that learning disabilities are not outgrown, although they may be manifest in new ways during adulthood (Horn, O'Donnell & Vitulani, 1983: Kroll, 1984; Polloway, Smith & Patton, 1984). Although estimates of the incidence of learning disabilities in children range from 1% to 30%, most common estimates do not exceed 15 % (Belmont, 1980; Travis, 1979). Special education services for learning disabled children were actually provided in 1984 to 4.64% of school children nationally ("Special Education," 1985). The incidence of learning disabilities in adult basic education students, however, could reasonably be expected to exceed that in the general population. Special education services for learning disabled students were nonexistent prior to 1964, leaving a large pool of adults who never received such services or who were identified late in their school careers. A high drop-out rate could be expected for such individuals. There is also evidence that even among learning disabled students receiving special education services, the high school drop out rate is likely to be higher than for the general population (Levin, Zigmond & Birch, 1985). Thus it is reasonable to assume that the ABE instructor is more likely to encounter learning disabled students than adult educators working in other environments.

There is relatively little research to guide the adult basic education instructor in his or her efforts to help the adult with specific learning disabilities. One of the difficulties complicating such research is the lack of a standard definition for the term learning disability. Unfortunately, the term is often used generically to refer to learning problems associated with any of a number of physical, psychological and environmental causes. The term was defined for this research in a manner consistent with the definition included in PL-94-142, the Education for All Handicapped Children Act of 1975. This definition stresses difficulties in processing information in addition to achievement below the level expected based on ability. This definition has served as a guideline for school placement since 1975, although operational definitions vary from state to state.

The diversity of the nature of learning difficulties exhibited by individuals with learning disabilities makes it impossible to identify any single set of teaching strategies that will be successful with all learning disabled adults, although a number of instructional methods have been identified for use with particular learning difficulties (Gold, 1981: Thistlewaite, 1983). Yet, in the continued search for effective means of teaching adults with learning disabilities, one valuable resource remains largely untapped -- learning disabled adults themselves. Those who have worked extensively with adults with learning disabilities know that most of these individuals have developed sophisticated coping mechanisms both for concealing their learning disabilities and for acquiring needed information and skills. References in adult basic education literature to coping mechanisms used by handicapped learners often focus on the negative aspects, such as ways of hiding the disability (Peterson, 1981; Travis, 1985). Involving learning disabled adults in efforts intended to focus on coping strategies from a positive standpoint provides an alternative approach. Hamilton (1983) has described the need to involve learning disabled adults in the program planning process as we recommend with other adults.

Methodology

Research Questions

One goal of this project was to provide adult basic education teachers and literacy program coordinators with a list of learning strategies used successfully by learning disabled adults to compensate for their specific learning difficulties. A second goal was to identify areas in which the greatest assistance was needed to develop effective learning strategies. To accomplish this goal, the following research questions guided the project.

1. What factors motivate adults with learning disabilities to seek assistance from adult basic education programs or literacy councils?
2. What benefits do learning disabled adults consider adult basic education or literacy programs to offer when compared to previous learning experiences?
3. What do these learners perceive as their learning strengths? Are any patterns in learning strengths evident among those interviewed?
4. What learning strategies are reported for general reading and spelling tasks as well as for reading and writing for the specified life situations?
    a. reading at work
    b. completing a job application
    c. reading household bills
    d. ordering food from a menu
    e. reading labels/directions for medicine
5. Who do learning disabled adults rely upon to assist them with reading/writing tasks or to help them compensate for their lack of reading and writing ability?
6. What kinds of non-print media resources are used for learning?
7. Are there particular tasks for which strategies seem to be particularly lacking or ineffective?

Procedures

Letters aimed at identifying eligible participants were sent to all administrators of adult basic education programs in the state of Pennsylvania (as determined by a list of 135 programs currently receiving Federal Act 306 funds) and to those individuals included on a list of 63 literacy council coordinators. The letters indicated that face-to-face interviews would be conducted with each participant as well as his or her teacher/tutor. The letter specified that participating students should be reading at or below an eighth grade level and should have been identified already as learning disabled by some official source such as the public school system, Vocational Rehabilitation Services, or a psychoeducational clinic. This mailing elicited a response from 27 programs, although 19 of the responding administrators indicated they could not identify students for participation in the project. Some cited confidentiality as a reason, while most indicated they did not know of any such students in their programs.

The circumstances surrounding selection of participants make it difficult to say with certainty that all the participants have specific learning disabilities. Finding adults enrolled in adult basic education programs with verified learning disabilities proved to be the major challenge of the project. In the end, self-report of a history of learning disabilities was the criterion accepted for participation. Interview transcripts of three participants identified by teachers but demonstrating no self-identification or history of identification were eliminated from analysis. Although all remaining participants described histories of school and non-school learning problems indicative of learning disabilities and all were reading below an eighth grade level (based on teacher report), only six participants clearly indicated a time and place when they were diagnosed as learning disabled. Several others participated in special education programs, although such programs were not necessarily for students with learning disabilities.

Interviews were completed face-to-face either at the site of instruction or in the student's home, with the exception of one interview which was conducted by telephone. Each interview was tape-recorded so that verbatim transcripts could be produced for content analylsis. Interviews averaged approximately 45 minutes in length. Students were interviewed by either the project director or the project assistant, a graduate student in adult education.

An interview guide was used to provide some standardization of questions, although questions were clarified at the discretion of the interviewer based on responses during the interview. This procedure was intended to provide consistency of information elicited without sacrificing clarity of meaning to individual respondents.

Once all interviews were completed the interview transcripts were read completely and responses to each question were coded in shortened form and grouped together for analysis.

Teachers or tutors were also interviewed when available. These brief interviews, focusing primarily on strategies taught for reading and identification of other areas of emphasis, were conducted for 11 students. These interviews were typically conducted by telephone and lasted approximately 15-20 minutes on average. They were not tape-recorded.

After data from teacher and student interviews were analyzed, five of the participating students were contacted to confirm the interpretations of the data regarding learning strategies. Lists of the strategies used by all students were mailed to eight participants; only five could be reached at the telephone numbers given at the time of the interview to determine whether they felt any information had been left out in reporting the strategies they used. None of those contacted wished to add any additional information.

Description of the Data

Complete data was available for 12 men and 3 women ranging in age from 20 to 56. The inadvertent loss of the tape-recording of one interview prior to transcription meant that only partial data was available for that participant, a male in his 20s. Six of the respondents were single (never married), six were married, one was divorced, and two were separated from their spouses. Of the six who remained single, four still lived at home with parents or grandparents. Most of those interviewed (nine) were employed in unskilled or semi-skilled positions such as warehouse worker and hospital dietary technician. Two were self-employed in their own masonry and auto mechanic businesses. Of the unemployed participants, two were disabled and three had been recently laid off as steel workers.

Despite current reading levels below the eighth grade level, six of the fifteen completed high school. While one man only went as far as the fourth grade and one woman only attended school until the sixth grade, the remaining participants attended school at least until completion of the 9th grade. Six of the 15 for whom transcripts were analyzed were able to report precise information regarding the time and place of diagnosis of learning disabilities. Three had been diagnosed in the public schools, two had been tested by the Division of Vocational Rehabilitation, and one man had been diagnosed by a hospital psychoeducational clinic at age 5 and reevaluated at age 32. In addition to these six, two other participants reported being in special education classes while in school, although it was not clear from the information given if these were definitely classes for learning disabled students. The remaining participants described life and schooling histories suggestive of possible learning disabilities although the procedures used in this project did not permit absolute verification of their self-identification.

Participants' reasons for seeking help through a basic education or literacy program were typical of reasons adults offer for seeking further learning. Many hoped to find a job or a better job, a number expressed reasons related to family role (reading to children) or transition (

marital separation), and a few emphasized a desire for personal improvement. Friends and concerned professionals also played a key role in encouraging several of the adults to seek help.

A number of respondents noted that the learning situation found in the adult basic education or literacy program provided an unprecedented opportunity to work at one's own pace. Specific benefits attributed to involvement in the program included an increased interest in reading, improved general ability to read, being able to fill out job applications, and increased feelings of self-confidence.

Most of the interview guide focused on strategies for coping with learning difficulties. Some of the most interesting information came, however, in response to questions about learning strengths and self-planned learning projects. The talent and creativity of most respondents in areas that did not depend on using print materials were evident in the responsible positions they attained in work settings emphasizing non-verbal abilities and in the elaborate building projects they planned. Again and again these learners expressed preferences for learning by seeing a task demonstrated or learning by doing. Several were good mechanics, and one young man had started his own car repair business. One man applied his understanding of the automobile to build a hot rod truck work $18,000 from approximately $1,000 worth of materials. Capabilities for building were demonstrated by a man with his own masonry business, another who financed real estate ventures though household odd jobs, and another who built his own cabin. To the extent that learning of new information has been dependent on their abilities, the respondents have been able to function effectively. Yet several met frustration when new tasks required new skills, like Chris who was doing fine in a supervisory role in the mill until this role began to require more reading. He, like many of those interviewed, had more strategies for coping without reading than for confronting a reading task.

The general reading strategy most frequently reported by the participants was use of surrounding context to either to obtain meaning without decoding a particular word, to make a reasonable word substitution, or to figure out the correct word. If reports of sounding out words and breaking words into parts are combined, it is evident that participants are just about as likely to attempt some form of word analysis as they are to use context. A comparison of the strategies reported by students and their teachers or tutors indicates that there is fairly consistent agreement between the strategies instructors and their students report. The influence of teaching on strategies is further indicated by the reporting by students of at least two strategies that would not have been indepedently developed: use of talking books and the language experience approach. Two of the reading strategies reported by students may or may not have been taught, and offer little help to the mature and independent reader. These include use of picture cues and asking for help. The adult learner who may be dependent on these strategies is likely to be frustrated since often no one is available to assist with a reading task and picture cues are limited in most adult reading materials.

Respondents were less able to describe strategies used effectively for spelling tasks than for reading. Although several respondents reported fairly sophisticated strategies-- including attempting phonetic spelling, using a dictionary or carrying a list of number words in a checkbook-- a number of people responded to spelling tasks through avoidance mechanisms. A few asked for help or substituted other words, but others simply had no idea where to start with spelling an unfamiliar word and avoided writing altogether.

With regard to reading/writing tasks often included in life/skills curriculums, compensatory strategies were identified with more frequency than direct means of approaching the task. Job applications posed a problem for almost all respondents, although several had never applied for a job that required an application. Most dealt with this problem by taking the application to someone who could help; rarely did they have difficulty obtaining and application to "complete at home." Once on-the-job, reading appeared to be a minimal requirement for this group. Most held jobs which required little or no reading, a few perceived job-related reading as a problem related to job advancement or running one's own business. About half the group experienced difficulty reading food menus. Those who reported this as a problem coped by ordering standard food items, waiting to order last in a group, or asking the waitress for a suggestion. One respondent had particular difficulty when he went into the hospital and was expected to order food daily from a menu; he was embarassed to have to ask nurses or kitchen staff to read the options to him. Reading medicine labels was rarely perceived as a problem by the respondents. Most relied on remembering a doctor or druggists' directions and looking for the numbers on the label which indicated frequency and timing. Likewise reading household bills was not generally perceived as a problem; where it was, help was sought from a family member or neighbor.

Parents, spouses, and friends often serve a crucial support role for these participants. All except two of the respondents were able to identify one or more key persons they rely on for help with reading tasks on a regular basis. For the young adults in the group, parents or other relatives were likely to be still providing this form of support. For at least one older participant, a sibling had taken on this role once his parents died. Married respondents typically relied on a spouse, although one man chose not to rely on his wife for help because she lacked patience and another man blamed his dependent relationship with his wife at least partially for their marital separation. There were indications, however that these participants also acted as contributing members of their social networks (Fingeret, 1983). Lisa noted that when she was married she was the one who was the speller while her husband was good at math. Today, she exchanges favors with another single parent friend. A number of other respondents were able to report favors they did for those who assisted them. These favors generally matched their areas of strength, with many of the men working on cars or doing household repairs as a way of paying back those who assisted them in other ways. Bob's description of a learning project which involved building a hotrod truck clearly illustrated the exchange system in a social network where skills have a trade value. This $18,000 vehicle was put together beginning with $1,000 worth of materials and adding the labor of he and several friends. For those skills he did not have, he swapped other labor, for instance, remodeling the kitchen and bathroom of the friend who custom painted the car in his body shop. Insightful teachers will help adults with learning disabilities recognize such contributions for their true value. This is important in helping them build self-esteem despite continuing events which may provide negative messages about the self.

Summary and Conclusions

Interviews with 19 adults participating in adult basic education literacy programs were conducted to ascertain the strategies they use to compensate for reading and writing difficulties. While it was the intent of the project as planned that all participants would be adults identified as having specific learning disabilities, finding such adults within adult basic education programs proved to be one of the most significant problems of this research. In the end, fifteen interview transcripts were included on the basis of self-reported histories indicative of learning disabilities, although the time and place of diagnosis was clearly identified by only six of the 15.

A variety of learning strategies were reported by participants for dealing with general reading and spelling tasks. Utilization of context, word analysis, and seeking help from others were the predominant strategies for reading. For the most part, however, individuals exhibited a limited repertoire of approaches to independent reading and writing. This was especially true when it came to spelling, which many respondents simply avoided. This suggests that unless teachers spend time on strategy development and transfer of strategies across situations, poor readers may tend to rely on a restricted set of strategies and compensatory avoidance mechanisms.

The generally low level of perceived difficulty with non-academic reading/writing tasks may be attributable to the structure of the lives of the respondents and their high utilization of human resources and social networks. Most of the respondents lead lives in which the day-to-day requirements for reading are limited. Their involvement in an adult basic education or literacy program serves as an indication that they would like to make changes in their lives, but for now, most use a combination of avoiding situations likely to require reading, utilizing limited reading and spelling learning strategies, and compensating through a variety of techniques including seeking assistance from others. Although adults with learning disabilities can make valuable contributions to those who assist them within the family or social network, a possible imbalance in dependence within such relationships can place a strain on interactions. As counseling programs are designed to work with learners, it may be very important to consider working with family members or significant others serving in a supportive role.

The data also suggest the importance of considering both expressed learning needs and unrecognized learning needs. For instance, few learners perceived a problem with reading medicine labels although most seemed to depend on memorization of the directions and limited reading of dosage directions. These strategies may be effective for prescription medications but could lead to problems with over-the-counter drugs if the individual is unable to read warnings about drug interactions, drowsiness caused by drugs, and medical conditions which could result in complications with the use of certain drugs.

Finally, the interviews documented that each respondent despite his or her learning problems demonstrated areas of learning strength. For many of those interviewed their strengths happened to be in nonverbal performance areas such as mechanical abilities, but some also reported a knack for remembering what they heard as well as what they saw. Because of their particular learning strengths many of the respondents were skilled in automobile mechanics, home repair and other crafts. Given the diversity of patterns of specific learning disabilities it is not reasonable to assume that all adults with learning disabilities will share these learning strengths. It is important, however, for the adult basic education teacher to attempt to identify those learning strengths which each learner brings. These strengths will influence the learner's receptiveness to various learning strategies that are taught.

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CRITICAL TEACHING BEHAVIORS AS PERCEIVED BY RETURNING ADULT COLLEGE STUDENTS

Jovita Martin Ross, Assistant Professor, Pennsylvania State University
Margarita Peña, Doctoral Candidate, Pennsylvania State University

Abstract

This study was conducted to identify those teaching behaviors critical to returning adult college students' judgements of teaching as either outstanding or poor. Flanagan's Cricital Incident Technique was used to elicit responses from 188 students 25 and older. Results of inductive analysis are presented.

Statement of the problem

A considerable body of literature is devoted to the topic of student evaluation of faculty at the college level. Feldman (1976) reports one of the more comprehensive reviews of research investigating student perceptions of superior teaching. He notes that across studies using several types of measures two dimensions are most consistently associated with superior college teaching from a student viewpoint: (a) stimulation of interest, and (b) clarity (understandableness). Comparing results from studies which provide students an opportunity to freely note those dimensions they see as characteristic of the ideal or best teacher to studies which utilize a structured questionnaire or checklist, he observes that dimensions related to the task of facilitation are among those most frequently mentioned by students spontaneously. These dimensions include friendliness, helpfulness, and openness to other's opinions. He suggests that while these social-emotional matters may be a central part of the response repertoire they become less important as more specific and structured situations increase the saliency of other characteristics.

In an attempt to demonstrate the validity of student evaluations Marsh, Overall and Kesler (1979) compared faculty members' self-evaluations with evaluations by students for the same courses. Mean differences between student and faculty were not significant, and both groups agreed on the behaviors most descriptive of the faculty. Instructors were asked to indicate which of the two courses evaluated they considered to have been most effectively taught; student ratings were higher for those courses faculty thought they did the best job in, and student evaluations showed even better differentiation of good and poor performance than did faculty self-evaluation. In a second study validating students' perceptions of effective teaching against faculty perceptions, Bridges, Ware, Brown, and Greenwood compared the lists of "six outstanding characteristics of the best college teacher you have even known" for students, faculty and administrators at the same institution. An extremely high level of agreement was found among the three groups regarding perceived relative importance of categories. Characteristics regarding the best teachers which were ranked high by all groups included: enthusiasm, interest in students, and personality. At least two of the three groups agreed regarding knowledge of subject, preparation, and presentation.

The studies cited here support the claim that student evaluations are a valid indicator of teaching performance. Those taking a phenomenological perspective toward research on college teaching would argue furthermore that the perspectives of students are critical in interpreting the instructional interaction. Given the steady growth of the adult student population within higher education, it seems important that we study this group's perceptions of college teaching for two purposes: (a) to determine in what ways adult students' perceptions of effective teaching agree with or disagree with those of younger students, and (b) to determine the extent to which the teaching characteristics judged as most critical by adult students are consistent with predictions based on assumptions about adults as learners.

In the review of the literature conducted prior to this research, two studies were identified which reported perceptions of adult college students with regard to effective college teaching. Alciatore and Alciatore (1979) queried 1,593 college seniors about the quality of the college teaching they received as undergraduates. With regard to age distinctions, Alciatore and Alciatore note only that younger students (under 24) agreed with older ones concerning the characteristics of the best and worst teachers, although younger students were more critical of their teachers as a whole. The qualities of the "best" teacher cited by students in this investigation included: (a) interest in students, (b) good personality, (c) interest in subject matter, (d) ability to make the subject interesting, and (e) objectivity in presenting subject matter and in dealing with students. In another study, Keller and Switzner (1983) asked 35 undergraduate students to write down the name of "the best teacher I ever had," then to describe that teacher as completely as possible. The investigators divided the students' responses into four construct categories: (a) psychological (character, personality, or otherwise dispositional), (b) role (habitual activities or role-relevant beliefs), (c) interaction (communication behaviors such as voice and gesture), and (d) other. A higher proportion of the responses of adult students (25 or older) related to psychological constructs (50.7% vs. 35.6% for younger) and interaction constructs (8.6% vs. 5.6%), while a higher proportion of the responses of younger students related to role behaviors (57.4% vs. 34.8% for older). While these results suggest direction for future study, the small number of adult students included in the research (13) limits the ability to make generalizations from the study. The current investigation was undertaken to further explore adult students' conceptions of good college teaching.

Methodology

A data collection technique was desired for this investigation which permitted the systematic analysis of open-ended responses suggesting meanings adult students themselves attribute to teaching effectiveness or ineffectiveness. For this reason the Critical Incident Technique, developed by Flanagan (1954) was selected. Flanagan describes the technique as "essentially a procedure for gathering certain important facts concerning behavior in defined situations (p. 335)". Flanagan has indicated that the technique does not consist of a rigid set of rules governing such data collection, but rather a "flexible set of principles which must be modified and adapted to meet the specific situation at hand" (p. 335). Although interviews are the most commonly used method of data collection, written questionnaires are seen as an acceptable alternative "where the observers are motivated to read the instructions carefully and answer conscientiously (p. 343)". Gilbert (1958) used the technique to identify characteristics of the best and poorest college teachers according to the perceptions of 144 college faculty and department heads. High on the list of favorable characteristics were knowledge of subject matter, practical application of material, encouraging students to think, giving academic help, encouraging questions in class, using concrete examples, and showing a willingness to discuss student personal problems. Menges and Kulieke (1984) used the critical incident technique to identify variables associated with satisfaction and dissatisfaction in the college classroom for 54 college students. Of those variables which related to teacher behavior, most frequently mentioned were requirements concerning the teacher's affective behavior, including interest in students, consideration or respect, criticism, and communication patterns. Teacher feedback, interest in subject matter, and allowing students to express themselves were among the most frequently mentioned critical requirements related to teacher tasks.

In the current investigation a questionnaire was mailed to a randomly selected sample of one third of the population of students over 25 (526 students) enrolled in undergraduate classes at the main campus of a multi-campus northeastern university . Students were asked to respond to six open-ended items related to teaching behaviors of their instructors. These items elicited recall of situations seen as representative of the best or poorest instruction they personally had experienced in college. The questionnaire also requested basic demographic data (sex, age) as well as some information specific to the situation of the adult student (years away from school, employment, number of children).

A consolidated list of common responses was obtained through content analysis of the answers given to each one of the six open-ended questions. Statements referring to critical requirements of effective teaching were then grouped under broad categories derived from the data. Critical requirements related to teaching behaviors were classified under four categories: (A) attitude towards adult student, (B) teacher-student relationship, (C) teaching style, and (D) personal characteristics. Statements related to students' reactions to particular behavior were also grouped in four categories: (A) feelings towards instructor, (B) feelings towards the subject and school, (C) actions taken, and (D) feelings about self. The respondents were grouped according to age and sex and frequency counts were completed for the questions on teachers' behaviors and on students' reactions.

Results

Sample

One hundred eighty-eight of 508 deliverable questionnaires were returned. Of the 188 repondents 52% were males and 48% females (7 questionnaires were returned unanswered). Their ages ranged from 25 to 57 and 13.8% of them had been away from school two years or less, 64% had been away between 3 and 10 years, and 22% had been away 11 or more years. Sixty two percent of the males were between 25 and 29 years of age, 35% were between 30 and 34, and 13% were 35 or over. Thirty eight percent of the female repondents were between 25 and 29 years of age, 31% were between 30 and 34, and 31% were 35 or over.

Aggregate results

A total of 619 answers were given to the two questions asking students to "describe briefly, accurately and objectively" some specific act by a particular instructor that "helps him or her stand out in your mind as a superior or particularly ineffective teacher of adults." Positive comments accounted for 57.18% of the responses and negative comments accounted for 42.81%. Three hundred nine answers were given to the two questions asking the students to "state briefly your reaction to [the instructors'] behavior,"161 (52.10%) of which described reactions to positive incidents and 148 (47.89%) to negative ones.

Critical requirements of effective teaching. Of the 41 responses under category A (attitude towards adult student) 29 described positive experiences and 16 focused on schedule flexibility (such as rescheduling tests or changing deadlines, based on the adult's particular situation) as the most critical behavior of teachers when dealing with adult student. Inflexibility was referred to as a negative experience although at a much lower frequency (5 students).

Concerning the teacher-student relationship (category B) 119 out of 184 answers referred to positive incidents: 29 pointed to the value of individual assistance provided by the instructor beyond class (the instructor "was always available at office hours," or "was available out of class), 27 mentioned the teacher's concern for students' learning (the instructor"made sure we had understood" or "really cared") and 16 referred to the teacher's ability to create warm climate (the instructor"treated students as equals","acted human"). On the negative side (65 responses) 11 comments were complaints about the teacher not being available outside class and 9 were about unfair or bad treatment given to students (the instructor "showed favoritism for young female students," "made fun of certain types of people," "embarrassed students" etc).

As for the teaching style (category C), 157 out of 281 responses related to positive experiences: 31 referred to the clarity of presentations (the instructor "made difficult material clear," "gave clear, organized presentations") and 22 to the ability of teacher to elicit student involvement ("encouraged students' participation" "encouraged participation without making students feel bad"); 16 emphasized interesting lectures and 15 the planning and organization of lectures. Negative experiences (124 answers) included inconsistency --evaluation of material which had never been covered in class being the most frequent complaint-- (20), poor planning and disorganized lectures (17), boring lectures (16), and confusing explanations (15).

Finally, of the 119 answers listed under category D (teacher's personal characteristics), 59 referred to positive experiences: 17 mentioned the teacher's enthusiasm, 14 the instructor's knowledge of the subject matter and 11 his or her good humor. Negative comments most frequently related to speech communication problems, particularly in the case of foreign teaching assistants (11 answers).

Students' reactions. A total of 309 answers described the students' reactions to the critical incidents; 161 corresponded to positive incidents and the remaining 148 to negative ones. Most of the positive reactions fell under category B (feelings towards the subject and school in general) with 59 answers, 16 of which described learning as a positive feeling and 10 mentioned motivation. Of the 57 positive reactions under category D (feelings about self), 16 responses described feelings of self-confidence and delight. On the negative side, the greatest proportion of responses (54) fell under A (feelings towards the teacher) and 17 responses stated reactions of anger, irritation or fury.

Analysis by sex and age group

As can be observed in Table 1, most positive comments fell under categories C (teaching style) and B (student-teacher relationship) while category A (attitude towards adult student) was infrequently mentioned by the respondents across all age groups. Both males and females gave priority to the instructor's teaching style. As for negative comments, both males and females in all age groups focused their comments on negative incidents related to the instructor's teaching style.

Of the 309 answers about students' reactions to particular incidents 161 described positive feelings and 148 referred to negative reactions. As indicated in table 2, males' comments focused mainly on category A (feelings toward teacher), while most responses given by females referred to the reactions grouped under D (feelings about self) in first place, followed by A, both categories having high frequency counts.

Summary and Conclusions

The inductive analysis of adult undergraduate students' statements about incidents perceived to be indicative of particularly effective or particularly poor college teaching reveals considerable consistency with results obtained in previous studies of traditional age students' perceptions of effective teaching. Although the sampling technique permits generalization only to adult students at one campus of a major university and statistical procedures did not include tests for significant group differences, the findings suggest areas for further exploration. Across age groups and for both sexes the most frequently described characteristics of teaching incidents viewed favorably focused on teaching style, including clarity of presentations, organization of presentations, the ability to create student involvement, and interesting lectures. The category teacher-student relationships was next most prevalent in student comments, with positive statements about teachers who provided assistance beyond class, showed concern for students and created a warm learning climate. Negative comments in this category focused primarily on unavailability or unfairness toward students. Contrary to research indicating that teacher expressiveness is more important to overall faculty evaluations than instructional content under certain experimental conditions, personal characteristics of teachers was the third most frequently mentioned category for this group of students. Finally, the smallest number of comments focused specifically on instructors' attitudes toward adult students. This was true despite the fact that instructions did call attention to the students' judgements of teaching as an adult student.

Although the dimensions of effective college teaching mentioned here are in agreement with previous studies, the prominence of teaching task dimensions over affective dimensions in these data is a contradiction to Feldman's (1976) conclusions This findings also disagree with Menges and Kulieke's (1984) findings using the critical incident technique with younger college students. It is valuable to note, however, that encouragement of student involvement was included under teaching style for the current investigation although Menges and Kulieke would probably include it among their teacher affect dimensions. Another discrepancy between the results of this study and previous studies is the relatively scarcity of comments about teacher fairness when adult students described good teaching; they were likely only to comment on the absence of fairness as a salient variable in poor teaching. The data suggest adult students are most concerned that a college instructor demonstrate effective task-related behaviors, and may be secondarily concerned with teacher-student relationship dimensions and teacher personal characteristics. Although somewhat surprising,this finding may be interpreted in light of adult college students high level of motivation to achieve, which might lead them to be more concerned about task dimensions related to instructors' presentation and organization of material. The inclusion of discussion facilitation in the teaching style category also may distort the data, since this dimension is difficult to classify as either entirely task-oriented or entirely related to teacher-student relationship.

A unique contribution of this study is the inclusion of questions regarding students' personal reactions to the selected teaching incidents. The data here are less consistent across age groups, particularly in terms of the categories of positive responses. Apparent differences between males and females are also indicated, with females more likely to report feelings about self and males more likely to report feelings about the instructor in response to negative teaching incidents. Positive incidents seem to contribute more to feelings about self, the content studied, and school in general than about the instructor. This suggests the power that instructors have to nurture motivation in the adult student.

Future studies should compare large samples of otherwise similar adult and traditional age college students. Student reactions to classroom experiences should be studied in addition to the dimensions they perceive as salient to teaching effectiveness.

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Table 1. Teacher behaviors - Ranked by frequency

Positive responses

Age 25-29		Age 30-34		Age 35+	
58 males - 111 comments		23 males - 45 comments		12 males - 19 comments	
C.	54.05	C.	44.4	B.	42.1
B.	26.12	B.	26.26	C.	37.57
D.	15.30	D.	26.60	D.	15.78
A.[5]	4.50	A.[1]	2.20	A.[2]	10.50
33 females - 63 comments		27 females - 54 comments		27 females - 62 comments	
B.	47.61	C.	38.80	C.	40.30
C.	31.74	B.	33.33	B.	33.87
D.	1.58	A.	14.81	D.	12.90
A.[4]	6.35	D.	12.90	A.	12.90

Negative responses

Age 25-29		Age 30-34		Age 35+	
58 males - 88 comments		23 males - 23 comments		12 males - 17 comments	
C.	43.18	C.	39.13	B.	41.10
B.	29.50	B.	26.00	C.	41.10
D.	26.13	D.	26.00	D.	11.76
A.[1]	1.10	A.[1]	4.35	A.[1]	5.80
33 females - 50 comments		27 females - 50 comments		27 females - 37 comments	
C.	50.00	C.	50.00	C.	48.64
B.	22.00	B.	32.00	B.	27.00
D.	20.00	D.	16.00	D.	18.90
A.[4]	8.00	A.[1]	2.00	A.[2]	5.40

A. Attitude toward adult student
B. Teacher-student relationship
C. Teaching style
D. Personal characteristics

Table 2. Students' reactions - Ranked by frequency

Positive responses

Age 25-29		Age 30-34		Age 35+	
58 males - 58 comments		23 males - 21 comments		12 males - 7 comments	
B.	41.30	D.	47.60	A.[3]	42.85
D.	39.60	B.	28.00	D.[2]	28.50
A.	17.20	A.	19.00	B.[2]	28.50
C.[1]	1.70	A.[1]	4.70	C.	-0-
33 females - 25 comments		27 females - 24 comments		27 females - 26 comments	
D.	44.00	B.	45.00	D.	53.84
B.	32.00	D.	29.10	B.	30.70
A.[4]	16.00	A.[4]	16.60	A.[4]	15.30
C.[2]	8.00	C.[2]	8.30	C.	-0-

Negative responses

Age 25-29		Age 30-34		Age 35+	
58 males - 46 comments		23 males - 16 comments		12 males - 11 comments	
A.	41.43	A.[5]	31.20	A.	54.54
D.	28.26	B.[5]	31.20	D.	45.45
C.[7]	15.20	C.[4]	25.00	C.	-0-
B.[7]	15.20	D.[2]	12.50	B.	-0-
33 females - 27 comments		27 females - 25 comments		27 females - 23 comments	
D.	33.33	D.	36.00	D.	43.00
A.	25.92	A.	32.00	A.	39.103
C.	22.22	C.	20.00	B.	8.60
A.	22.22	B.[3]	12.00	C.[1]	4.30

A. Feelings toward instructor
B. Feelings toward subject and school
C. Actions taken
D. Feelings about self

APPLYING ADULT LEARNING PRINCIPLES TO TEACHER EDUCATION

Diane Tickton Schuster, Ph.D.
Center for Developmental Studies in Education
The Claremont Graduate School

Teacher education programs need to be restructured in order to respond effectively to national demands for educational reform. The principles of adult learning can inform the redesign of teacher education curricula. The Teacher Education Internship Program at The Claremont Graduate School has become a model adult learner program.

The current crisis in America's schools has been documented in a recent series of books and commission reports that analyze the growing need for reform in our country's public education agenda. National and state forums have called for a re-examination of teachers' careers, work conditions, performance evaluations, and reward structures. It is widely agreed that now is the time to make teaching more attractive as a profession (Carnegie Commission, 1986; Holmes Group, 1986; Commons Commission, 1985; California Roundtable, 1985).

The need for reform in _teacher education_ also has been established, especially in light of increased hiring needs of school districts across the nation and the continuing exodus from the profession by thousands of talented individuals. American educators are reviewing outdated models of teacher education, endeavoring to upgrade admission standards for teacher preparation programs, and looking for ways to broaden recruitment to the teaching field. New targets of recruitment include adult learners.

As teacher educators are beginning to clarify strategies for reform, they are discovering that the principles of adult learning provide valuable lessons for "the teachers of teachers," and they are integrating these principles into redesigns of both the curriculum and the practicum aspects of teacher education. Such a restructuring is taking place in the Teacher Education Internship Program at The Claremont Graduate School, Claremont, California.

Longstanding Trends in Teacher Education

Traditionally, teacher education programs have prepared students to deal with the structures and roles of a teacher's life: curriculum, measurement, discipline, authority, and, for a few, professional advancement. Designed for undergraduate education majors, these programs typically have been characterized by fixed curricula at the undergraduate level; pre-fieldwork lectures and assignments that focus on learning theory, curriculum planning, and specific methodologies; part-year, unpaid student teaching assignments; student dependence and imitative behavior;

the expectation that "real teaching" will begin with the first year of full-time employment; and an operating assumption that teachers will be content to remain in their chosen profession throughout adult life.

Teacher Education Today: A New Student Population

The new "reform" literature in education has focused more on the conditions of the workplace for American teachers than on the reshaping of teacher education curricula and programs per se. New priorities in teacher education, however, are beginning to emerge as teacher educators discover more about the new population of students that is enrolling in certification programs. For example, in some states, undergraduate majors in education are being replaced by post-baccalaureate credentialing programs; consequently, entering students are at least 22 years old and frequently considerably older. In addition to being older, the new teacher education students generally have been employed at least part-time, and often full-time, prior to continuing their education. Many have been self-supporting and have learned of their capacity for success in the workforce. Moreover, as undergraduates, these students have chosen majors that have reflected a wide variety of personal or career interests, and they pursue teaching careers with the hope of being able to apply the liberal arts or technical expertise they already have acquired.

Compared to earlier generations of teacher education students, current enrollments are especially heterogeneous. Many programs are actively recruiting minority candidates as well as reentry students, homemakers, and mature individuals who are willing to share their technical or life experience in new settings. Likewise, with shifts in the employment market in a variety of fields, career changers increasingly are looking to teaching as a new field for employment and personal fulfillment. At The Claremont Graduate School, where approximately one-third of the teacher education students have not had any previous paid classroom experience, the current student population includes women who have tried other professions but prefer teaching during the childrearing years; math, business, and science majors who have found the corporate or technical sector too impersonal or redundant; displaced homemakers who have discovered that they are excellent candidates for teaching positions due to their hands-on experience with young people and the larger community; and re-entry students who have begun the process of upward professional mobility (Schuster, 1986).

Teacher Education Reform: Serving Adult Learners

As increasing numbers of adult learners enroll in teacher education programs, the new scholarship on adult learning provides teacher educators with a rich context in which to view reform in teacher education. Recent research on such issues as adult learner motivation, adult learner needs and characteristics, adult development, and the "facilitation" process, can help teacher educators to shape curriculum and practicum activities that will better serve the needs of the new teacher education student population.

1. Adult learner motivation. Knox (1977), Aslanian and Brickell (1980), Cross (1981) and others have demonstrated that the majority of American adults are lifelong learners and that education is seen as a primary tool for assisting people whose work or personal lives are "in transition." Individuals are motivated to learn at all stages of the life cycle (Chickering and Havighurst, 1981). Provided adults have kept themselves reasonably stimulated during the adult years and provided there is no identifiable neurological impairment, the capacity to learn does not diminish in adulthood (Kidd, 1973; Birren and Schaie, 1977). Adults have been found to respond most favorably to those educational activities that reward them for past experience, enhance their self-esteem, foster their independence, and provide them with practical and useful information (Tough, 1979; Knowles, 1980; Knox, 1986).

The implications of these findings are of particular relevance to the early stages of the teacher education process. When adult learners are recruited, they can be led to understand how their previous work and life experience have prepared them to be effective in the classroom. From the beginning, when these students attend classes or practicum supervisory sessions, they may be treated as colleagues in the learning endeavor. Early on, they will benefit from receiving practical, concise information about the teaching-learning process; they will be particularly appreciative of useful "shortcuts" and "survival tips" that can be provided by experienced instructors. Personal modeling and real-life examples will help adult students to feel less isolated in their effort to learn new teaching skills. As they begin their teacher education program, adult students should be asked to participate in cooperative learning activities that will help them to share new information and develop an awareness of individual differences within learning groups. Such early community-building and team work sets a supportive, collegial tone they will value -- one that all too often is missing in public school settings.

2. Adult learner needs and characteristics. As Houle (1961) observed nearly thirty years ago, the majority of adult learners are goal-oriented. They come to the classroom to gain specific objectives, and those objectives most often are related to employment. As students, these adults are "in a hurry," more interested in utility than theory, and many approach their education with a "consumerist" orientation. Most adult learners are very responsive to experiential learning, and, once they learn "the basics," they like to be self-directing in new learning endeavors (Knowles, 1975). Moreover, adult learners generally are put off by a lecture-only format, responding better to simulations, group work, and activities that involve media and simple "new tech" equipment (Knox, 1986). These students want to see the relevance and applicability of what they are being taught, and they want to have hands-on experience that will prepare them

for their later classroom responsibilities.

Because of their general adult-life experience in the larger community, adult learners are particularly intolerant of "make-work" or other "hoop-jumping" activities that some educators require. They want to be given credit for previous experience, and they respond very positively to individualized learning contracts under which they identify and pursue specific learning goals (Knowles, 1986). Adult learners have been found to be highly intolerant of inflexible program or scheduling requirements that do not show any consideration of the realities and complexities of adult life (Knox, 1986). On the other hand, because of their maturity, adult learners tend to be extremely conscientious, respectful of authority, and appreciative of rigorous educational standards. When rewarded for excellence, they expand their learning objectives and make substantive commitments to the overall learning process (Brookfield, 1986; 1987).

The implications of these findings must be placed at the heart of reform in teacher education. In the classroom, in individual advisory sessions, in workshops that prepares students to interview for teaching positions, in the informal support system that teacher educators create for their students -- for that matter, in all phases of the teacher education process -- the particular characteristics and needs of adult learners must be given careful consideration. Teacher educators can embrace the impatience of the adult learner, and capitalize on the energy and competence that adults bring to their learning activities. Individualized learning contracts with prospective teachers can reinforce previous experience and can motivate these individuals to find active, workable solutions to specific problems encountered in the school organization. Experiential learning will foster a sense of immediacy, and through group interaction activities these students can learn to become positive personal and professional resources for one another. In terms of assignments and scheduling, teacher educators can establish an ongoing dialogue with their students -- both verbally and in writing -- to identify student concerns, questions, and values. Students can be asked to recommend suitable evaluation techniques or program components that they feel will be useful and relevant, and they also can be encouraged to critique those experiences they perceive as irrelevant. The more teacher educators model fair, student-centered, supportive behavior, the more teacher education students will develop the capacity for fair, student-centered, supportive attitudes in their own classrooms. Likewise, the more that adult learners feel that they are being consulted about their learning experience, the more invested they will become in overcoming whatever barriers they perceive in their pursuit of becoming effective teachers.

3. Adult development. Over the past decade, the emergence of major theory-based research on adulthood has given rise to considerable speculation about the issues of continuity and change in adult life (Rosenfeld and Stark, 1987). Theory-building about adult life stages (Erikson, 1950; Levinson, 1978; Gould, 1979),

about "timing" in adult life (Neugarten, 1968), and about women's developmental concerns (Rubin, 1979; Bardwick, 1980; Rossi, 1980; Gilligan, 1982), all have raised new questions about how adults grow and learn over the life cycle. Research on gender differences has shed light on how men and women are socialized differently and about how early experiences with parents and authority figures shape later interactions in families, educational institutions, and careers (Chodorow, 1978; Belenky, Clinchy, Goldberger, and Tarule, 1986; Rossi, 1986). Although relatively little work has been done on the adult development of specific professional groups, a seminal literature on teachers' lives has begun to appear (Lightfoot, 1983; Spencer, 1986; Raphael, 1985; Levine, 1987).

The adult development literature offers much to teacher educators and their students. Prospective teachers need to understand issues of human development across the lifespan, not only to better comprehend the development of their students, but also to recognize their own developmental needs throughout their professional lives. The sooner new teachers confront issues in their own development -- issues such as the timing of career choice, multiple role obligations, personal values and expectations, midlife attitude shifts, stress and burnout, and the psychological and physical effects of aging -- the better prepared they will be to cope with the conflicting demands that often overtax the lives of teachers.

4. The facilitation process in teacher education. Stephen Brookfield's (1986, 1987) work on facilitation with adult learners has particular significance for educators interested in reform in teacher education. Brookfield's model of the "effective facilitator" shifts the role of the educator from that of "the expert" to one of "collaborator" in the learning process. Effective facilitators begin with the assumption that students bring to the learning situation considerable knowledge and life experience that can be utilized in new learning endeavors. Facilitators structure learning content around the needs of the learners rather than around rigid plans or fixed curricula. Facilitators recognize that learners are changing continually because they *are* learning. They use questioning, diagnosing, and cooperative learning techniques more than "authority" teaching techniques.

The facilitation process in teacher education is a major tool for genuine educational reform. When teacher education students are facilitated rather than "taught," they become more involved in their own learning and become more independent in their professional development. Moreover, by having participated in the facilitation experience, these students become much more able to effectively facilitate the learning of their own students later on.

Applying the Principles of Adult Learning to Teacher Education

During the past two years, the Teacher Education Internship Program at The Claremont Graduate School has been restructured to better reflect new scholarship on human development and education. Informed by the constructivist model of how students learn and apply new information, the staff has reshaped curriculum and practicum in order to emphasize the fundamental importance of teachers' exploration, experimentation, and critical reflection. Informed by recent research on adult development, the Program's goals now include the objective that all prospective teachers (interns) learn about issues in lifespan development and lifelong learning. Committed to the principles of holistic education, the Program's faculty have begun to encourage interns to actively examine their own growth and learning as they prepare to foster the growth and learning of their own students.

The Claremont program is innovative and still evolving. Since 1986, numerous programmatic changes have resulted in a doubling of enrollments and a dramatic revitalization of faculty and staff. The incorporation of the principles of adult learning has led to several additions to the curriculum. Interns now are offered courses or mini-courses in Adult and Professional Development for Teachers, Teacher-Parent Interaction, and Teachers Coping with Stress. During the year-long paid teaching internship in which students function independently in their own classrooms, elective modules are offered at the Graduate School that specifically address learning needs identified by the interns. On the one night a week when these modules are offered, childcare is provided. The modules are facilitated by doctoral students (all former classroom teachers) who also serve as ongoing "advisor-mentors" to the interns; as a result, the interns are exposed to a variety of teaching styles and to the principles of effective facilitation. The modules are evaluated by the interns every other week. The evaluation process is also an explicit aspect of the intern-advisor relationship; both the interns and their advisors regularly evaluate themselves and each other, which encourages self-reflection, honesty, and collaboration.

During the early months of the Claremont program, an emphasis is placed on the provision of the practical (survival) information that new teachers need to know; theory is offered after the internship year, when students are better able to put their own experience and learning into perspective. Except for three basic courses on the teaching-learning process, students design their own curricula, taking those electives that they decide will most benefit their preparation for teaching. All students are given credit toward a Master's in Education at The Claremont Graduate School; the majority are able to complete additional coursework for the advanced degree within one year of receiving the teaching credential.

Throughout the fifteen-month teacher education process, Claremont's Teacher Interns are offered personal and career counseling, assistance with placement, networking opportunities, and solid doses of tender love and care. The nurturant environment has been welcomed by the interns and faculty alike -- all learners committed to truly adult education.

[Note: A list of citations may be obtained from the author.]

A STUDY OF THE TEACHING STRATEGIES USED TO PROMOTE SELF-DIRECTED LEARNING AMONG GRADUATE STUDENTS IN ADULT EDUCATION

Burton R. Sisco, Assistant Professor, University of Wyoming

Abstract: This report presents results of an exploratory study designed to determine if instructors of graduate students in adult education promote/facilitate competency for self-directed learning in their students and the range of teaching strategies used to promote such competence.

INTRODUCTION

One of the most persistent shibboleths in the discipline of adult education is the promotion of self-directed learning. Nearly every introductory text in the field pays homage to the concept as the ideal form of learning, especially for adult students (Brookfield, 1986; Darkenwald & Merriam,1982; Knowles, 1980; Knox, 1986). Knowles (1975) describes self-directed learning as the process in which individuals assume primary responsibility for planning, conducting, and evaluating their own learning. Having adult students develop greater competence as self-directed learners is a goal advocated by many adult educators (Gross, 1977; Knowles, 1975: Smith, 1982; Tough, 1979).

There has been a number of attempts aimed at identifying basic skills or competencies needed for self-directed learning. Knowles (1975) lists nine such competencies ranging from the ability to decide what knowledge and skills are required for learning, to the ability to evaluate one's own learning. Smith (1982) and Smith and Haverkamp (1977) have developed a process called "learning how to learn" in which self-directed learning competencies can be integrated into the design of formal courses and workshops with the expectation that greater self-direction will result.

Despite the adorations given to self-directed learning in the literature of adult education, most of the research on the phenomena has occurred outside formal educational settings (Brockett, 1983; Brookfield, 1981; Coolican, 1974; Hiemstra, 1976; Leean & Sisco, 1981; Penland, 1979; Peters & Gordon, 1974 ; Tough, 1979). The results of these studies have been fairly consistent demonstrating the preponderance of learning by most adults to be self-directing.

More recently, researchers have begun to study self-directed learning in formal educational settings, particularly higher education. The focus has been on finding ways to promote and integrate self-directed learning into more formal adult education activities such as courses and workshops. Two distinct approaches -- the Self Directed Learning Readiness Scale (SDLRS) developed by Gugliemino (1977) and the learning contract developed by Knowles (1975) -- have been utilized as a means for determining whether competence for self-directed learning can be fostered in formal adult education activities.

Kasworm (1982, 1983) investigated the development of self-directed learning knowledge and skills in her students enrolled in two graduate courses in adult education. Using the Self Directed Learning Readiness Scale (SDLRS), she found significant positive gains were made by her students in self-directed learning readiness and skills. She did note, however, that approximately 25% of the students had negative gain scores and would not choose another self-directed learning course.

Caffarella (1982, 1983) and Caffarella and Caffarella (1986) conducted studies using the learning contract as a means of fostering self-directed learning competence among graduate students enrolled in formal adult education course work. Early evidence based on a post only design, limited population consisting of the author's graduate students, and self-reporting data, indicated an increase in students competence for self-directed learning as a result of the learning contract. However, later work using a much stronger design resulted in the conclusion that the use of learning contracts only had an impact on certain competencies for self-directed learning. These included students ability: "(a) to translate learning needs into learning objectives in a form that makes possible the accomplishment of these objectives, (b) to identify human and material resources appropriate to different kinds of learning objectives, and (c) to select effective strategies for using learning resources" (1986, p. 232).

While research focusing on the promotion of self-directed learning in formal learning situations has grown recently, much more is needed. Research that has focused on the use of certain methods or techniques such as self-directed learning readiness scales and learning contracts are both timely and useful. However, one area in particular that has not received much attention, is how instructors of adults promote and facilitate competence for self-directed learning through the use of teaching strategies.

In order to begin dealing with this problem, an exploratory study was conducted to invesitgate whether instructors of adults promoted and/or facilitated competence for self-directed learning in their students, and if so, what specific teaching strategies were employed to promote/facilitate such competence? The major research questions addressed in the study were: 1) Do professors of adult education promote/facilitate competence for self-directed learning in their graduate students? 2) If so, what strategies are used to enable students to develop such competence for self-directed learning?

METHODOLOGY

Sample

The population utilized in this study consisted of all full or affiliate members of the Commission of Professors of Adult Education. This group is comprised of individuals who are teaching mostly graduate courses in the discipline of adult education on a full-time basis. Those who are teaching part-time are eligible for membership as an affiliate member.

The sample consisted of all 216 full or affiliate members of the Commission of Professors of Adult Education. A total sampling technique was used because of the interest in getting as broad a response to the research questions as possible. Due to the exploratory nature of the study, no demographic data were collected.

Research Instrument

A self-reporting survey was developed based on the Self-Directed Learning Competencies Self Appraisal Form (SDLCSAF) originally constructed by Caffarella and Caffarella (1986). The survey consisted of twelve self-directed learning competency statements; a yes/no indication of whether the respondent promoted each competency in their students; and the strategy(ies) used to promote/facilitate the self-directed learning competency. Additional space was provided for the respondent to indicate other self-directed learning competencies or strategies not included under the survey items. Construct and content validity of the twelve self-directed learning competency statements have been established by previous work of Caffarella (1982, 1983).

Data Collection

The study was conducted over a period of three months. The survey was designed, format piloted with several colleagues trained in research design, and then put into final form. It was mailed to the population via first class mail. A period of five weeks was allowed for the instrument to be returned. After the return date, a reminder letter was sent to the entire population thanking respondents for their help and encouraging those who had not completed the survey to please do so and return as soon as possible. Of the 216 surveys mailed, 67 were returned and 62 deemed usable for data analysis. This accounted for a usable return rate of 29%.

Data Analysis

Due to the exploratory nature of the study, simple descriptive statistics were utilized to determine whether respondents promoted/facilitated competencies for self-directed learning among their students. Simple frequency counts and percentages were reported for these data.

In order to analyze the range of reported teaching strategies, a content analysis proecedure was used to ascertain convergent and divergent themes. These themes were then grouped according to each competency statement.

RESULTS

Results of the study are organized according to: 1) yes/no responses to the twelve listed self-directed learning competency statements; and, 2) reported teaching strategies used to promote/facilitate the various self-directed learning competency statements.

Yes/No Responses

A cursory review of the response data indicated that instructors of graduate students in adult education do indeed believe they promote/facilitate competence in self-directed learning among their students. While the response rate for each competency statement was not 100% affirmative, all but one item yielded at least 61% or greater affirmation. Such results should not be surprising given the preponderance of adult education literature that stresses the importance of self-directed learning. The more surprising result would have been a strongly negative response to the idea of promoting/facilitating

Table 1
Percentage of Total Respondents Who Indicated That They Promoted/Facilitated the Given Self-Directed Learning Competency Statement in Their Graduate Students

Self-Directed Learning Competency Statement	*n*	Yes	No	No Response
1. The ability to diagnose my own learning needs realistically, with help when needed from teachers and peers.	62	87	10	03
2. The ability to translate learning needs into learning objectives in a form that makes possible the accomplishment of those objectives.	62	73	18	09
3. The ability to relate to teachers as facilitators, helpers, or consultants.	62	86	08	06
4. The ability to identify human and material resources appropriate to different kinds of learning objectives.	62	89	05	06
5. The ability to take the initiative in making use of the reources of my teachers.	62	74	15	11
6. The ability to select effective strategies for using learning resources.	62	74	16	10
7. The ability to execute the learning strategies skillfully and with initiative.	62	65	21	14
8. The ability to gain knowledge and skill from the resources utilized.	62	71	13	16
9. The ability to relate to peers collaboratively and to see them as resources for diagnosing, planning, and completing my learning.	62	90	10	00
10. The ability to deal and cope with personal blocks to learning.	62	61	31	08
11. The ability to renew my motivation for learning when it lags.	62	45	37	18
12. The ability to evaluate my own work and get feedback about my progress.	62	76	11	13

self-directed learning among graduate students in adult education.

In terms of specific competencies, Table 1 illustrates the overall response rate for each item according to the percentage of agreement, disagreement , or no response. It is noteworthy that four of the competency statements received an agreement score of 86% or greater. In particular, 90% of the respondents indicated that they helped students relate to peers collaboratively and to see them as resources for diagnosing, planning, and completing their learning; 89% indicated that they helped students identify human and material resources appropriate to the different kinds of learning objectives; 87% indicated that they helped students diagnose their own learning needs realistically with help from themselves or peers; and 86% indicated that they helped students relate to themselves as facilitators, helpers, or consultants.

At the same time, three competency statements received an affirmative score of 65% or less from respondents. In particular, 65% indicated that they helped students execute the learning strategies skillfully and with initiative; 61% indicated that they helped students deal and cope with personal blocks to learning; and 45% indicated that they helped students renew their motivation for learning when it lags.

Reported Teaching Strategies

As might be expected, respondents reported a wide range of strategies employed to promote competence for self-directed learning among their students. Table 2 lists selected strategies by each self-directed learning competency statement. A more complete list is available from the author.

Table 2
Selected Teaching Strategies Used by Respondents to Promote Competence for Self-Directed Learning by Competency Statement

Self-Directed Learning Competency Statement	Reported Strategy
1. The ability to diagnose my own learning needs realistically, with help when needed from teachers and peers.	* Have students interview each other * Use a learning contract * Use SDL rating scale developed by Knowles * Self-report inventories
2. The ability to translate needs into learning objectives in a form that makes possible the accomplishment of those objectives.	* Use of learning contract * Advising sessions * Self-designed and self-initiated projects * Use of small and large group process
3. The ability to relate to teachers as facilitators, helpers, or consultants.	* Use of interview schedules * Coaching, empathy, facilitator, openness * Learning contract * Modeling, critical incidents
4. The ability to identify human and material resources appropriate to different kinds of learning objectives.	* Use of learning contracts * Trips to the library * Act as resource person * Make personallibrary available to students
5. The ability to take the initiative in making use of the resources of my teachers.	* Use of interview/discussion sessions * Use of learning contracts * Class facilitator assignments * Open door policy

Self-Directed Learning Competency Statement (cont.)	Reported Strategy (cont.)
6. The ability to select effective strategies for using learning resources.	* Modeling, critical questioning * Field experience, interviews * Library assistance, ERIC, and other services * Collaborative learning approach
7. The ability to execute the learning strategies skillfully and with initiative.	* Critiques of contracts, group projects * Practicing/discussing alternative strategies * Practicum, coaching * Peer review
8. The ability to gain knowledge and skill from the resources utilized.	* Sharing resources in class with critique * Encourage critical analysis of materials * Use of learning contracts * Self and group evaluation
9. The ability to relate to peers collaboratively and to see them as resources for diagnosing, planning, and completing my learning.	* Group work * Supportive, open classroom environment * Small group activities * Networking
10. The ability to deal and cope with personal blocks to learning.	* Personal advising sessions * Encourage formative evaluation * Contract and group process * Encourage support groups, networking
11. The ability to renew my motivation for learning when it lags.	* Cheering section * Use McClusky's Power-Load-Margin Theory * Individual conferences * Teach intrinsic motivation strategies
12. The ability to evaluate my own work and get feedback from others about my progress.	* Class reviews of work in progress * Formative evaluation strategies * Advising sessions * Self-evaluation questionnaire

In reviewing the myriad of reported teaching strategies, it is clear that use of learning contracts was mentioned most frequently. In fact, it was mentioned as a strategy for nearly every listed self-directed learning competency. It is also noteworthy that the use of individualizing techniques such as advising, coaching, one-on-one conferences, and counseling were frequently reported as well.

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine whether instructors of adults promoted and/or facilitated competence for self-directed learning in their students, and if so, what specific teaching strategies they employed to promote/facilitate such competence? Specifically, the study was guided by two research questions: 1) Do professors of adult education promote/facilitate competence for self-directed learning in their graduate students? 2) If so, what strategies are used to enable students to develop such competence for self-directed learning?

It can be concluded from this study, that most respondents believe that they do promote and/or facilitate competence for self-directed learning in their graduate students. Of the twelve listed competencies that comprised the survey instrument, all but one were reported by a majority of respondents as something they do to encourage self-direction on the part of their students. The one competency statement that did not receive a majority response dealt with renewing a student's motivation for learning when it lags. A potential explanation for this finding may be that the competency is so personal in nature that unless a student brings it up, there may be little a professor can do to deal with the situation. However, being aware that this phenomena may exist in students and contribute to less than successful self-directed learning, should help instructors look for and anticipate such a situation, thereby helping students to more favorably cope with the problem.

It can also be concluded that there appears to be some consistency between adult education theory and practice, at least with those professors of adult education who responded to the survey. This should be greeted favorably by the profession since the literature places such a high premium on the development of self-directed learners; anything less would have been a potential source of embarrassment.

The data also suggest that there are a wide range of teaching strategies in use by respondents to promote/facilitate self-directed learning in their students. Such techniques as learning contracts, self-analysis inventories, role modeling, critical questioning, collaborative learning, and individual advising sessions are a few examples of the many strategies in use by respondents. One caveat should be kept in mind, however. The use of learning contracts was mentioned most frequently as the strategy used to encourage and nuture self-directed learning in students. While this technique has been championed by many adult educators as the ideal tool for encouraging self-direction, recent work by Caffarella and Caffarella (1986) would suggest that such lofty expectations should be tempered somewhat. They concluded that "the use of learning contracts should not be viewed as a major tool for the enhancement of the skills and competencies of self-directed learning" (1986, p.233).

This exploratory study has revealed evidence to support the contention that professors of adult education are indeed enhancing competencies of self-directed learning in their students through the use of selected teaching strategies. Nevertheless, additional work is needed to verify this finding since it is based on a self-reporting measure and not on actual observations. It is highly possible that respondents may think they are promoting/facilitating competence for self-directed learning, when in reality they are doing something else. Thus, further research is needed that combines self-reporting measures and observational techniques of both instructors and students involved.

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[1] A complete reference list for the paper is available by writing Dr. Burton R. Sisco, Department of Educational Administration and Adult Education, 304 McWhinnie Hall, University of Wyoming, Laramie, Wyoming 82071.

Volunteers Involvement In Adult Education Programs

Dr. Sara M. Steele, Director; Dr. Cathaleen Finley, Dr. John Fiss, and Carol Edgerton, Study Staff; University of Wisconsin Department of Continuing and Vocational Education.

Abstract: The paper reviews a national study of Extension volunteers for implications for adult education agencies. Volunteers can help adult education in many ways. Sharing adult education activities with volunteers can improve education and be of considerable value to clientele, volunteers, communities, and the adult education agency.

How should volunteers work with adult education agencies? What could be the value of the work of volunteers? Partial answers to these questions are found in the national study of volunteers' work with the United States Cooperative Extension Service conducted from 1983-1987.

Purpose: Using information from the Extension Service study, this paper will:

1) identify and categorize ways in which volunteers can assist adult education agencies.
2) identify the value of the work of volunteers to adult education agencies.

Perspective: Much of the literature of the field of volunteerism is written from the agency perspective. The Extension study examined volunteering from the views of volunteers, clientele, and community leaders as well as that of Extension agents. This paper reflects on the findings, conclusions, and recommendations of the study that may be most relevant to other adult education agencies.

Methodology: This paper uses an inductive, qualitative analysis drawing upon both quantitative and qualitative data. It draws from five sets of data gathered from a random national sample of 315 counties stratified by population.

Quantitative data were secured from 1) 1,035 agents by a mail questionnaire; and through telephone interviews with: 2) 1,114 volunteers, 3) 540 community observers, and 4) 469 clientele (people with whom Extension volunteers had worked). Samples were drawn from lists supplied by the Extension staff in the sample counties. Respondents were asked questions which identified the work of volunteers and rated the amount of benefit secured from volunteer activities.

Qualitative data came from site visits to 12 of the 315 original counties which were randomly drawn, based upon population and region where face-to-face, unstructured tape recorded interviews were conducted with 715 volunteers, clientele, and community observers. Interviewees were encouraged to speak from their own perspectives of reality. Study staff listened to and indexed 508 randomly selected interviews. Staff then categorized the kinds of programs described and the kinds of benefits indicated. The benefits cited in the non-structured face-to-face interviews were copied on to cards and the cards sorted into clusters from which the main categories were identified. These categories were compared with quantitative data on tasks and benefits included in the structured surveys.

Many people were involved in establishing major findings, conclusions, implications, and recommendations. Data were organized and sent to reactors across the country. Their recommendations were organized and reviewed by the project's National Advisory Committee which was made up of volunteers, Extension employees, and experts on volunteerism.

For this paper, the findings, conclusions, and recommendations of the Extension study analyzed for the probable implications for adult education.

How Can Volunteers Help Adult Education Programs?

Conclusion: The Extension study found that there were many ways in which volunteers work with Extension. Volunteers can play a unique role as teachers and facilitators of learning. They can do much to develop the context for learning and support educational activities. Through serving in planning and policy roles they can ensure that the educational program serves the adults in their particular community.

The 1985 Gallup Survey indicated that even though those who have completed college are most likely to be serving as a volunteer (at least 65%), only small percentages of volunteers are teaching or otherwise working in educational programs. The Gallup survey found that only 27% of the Americans who volunteered worked with an educational program--youth or adult. The most frequently indicated programs according to percent of respondents volunteering were religious organizations, 48%; informal volunteering, 40%; education, 27%; and recreation, 21%.

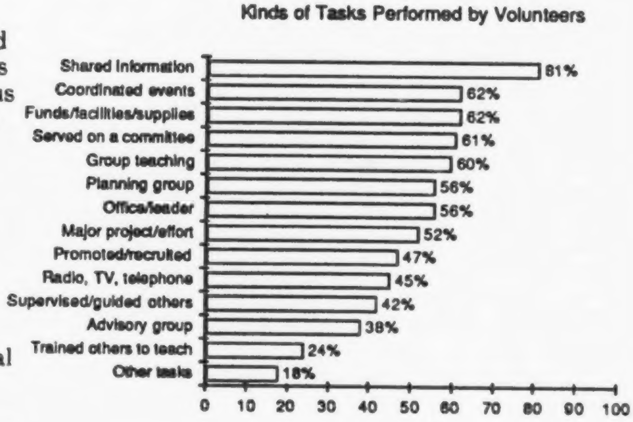
Almost twice as many American volunteers raise funds or babysit as those who serve as teachers and tutors (excluding religious education.) The most frequently indicated kinds of activities by the volunteers interviewed by Gallup were: assisting the elderly/handicapped; fund-raising for local organizations; babysitting; and serving as an aide/assistant to a paid employee. Even among those working with an educational agency, fewer than one in five served as a teacher or tutor. The largest percentage served as an aide or assistant to a paid employee or served as a fund raiser.

Tasks of Extension Volunteers

On the other hand, the Extension survey found that at least three-fifths of all of the volunteers with Extension had taught a group the previous year. Over four-fifths had shared information informally with others. About a fourth said they had trained other volunteers to teach.

The average Extension volunteer had worked with 8 of the 18 tasks during the preceding year. More than one-third performed 13 or more of the tasks.

(Extension volunteers interviewed included local 4-H club leaders, 4-H middle management volunteers, Extension Homemakers, Master Home Economics Volunteers, Master Gardeners, and Agricultural Cooperators.)



Program Formats

The qualitative analysis, which looked at the various activities described by those interviewed in the 12 counties, identified six formats for volunteer activities:

Direct Teaching. Extension's mission is education; thus many volunteers perform tasks to help people secure and use information.

Educational Events. Volunteers often plan and carry out events which attract participants and observers--fairs, shows, field days, contests. The events provide a setting in which education can occur.

Special Assignments. Individuals take part in applied research or carry out other individual assignments. Many volunteers work on short-term, ad hoc groups which carry out specific projects.

Community Organizations. The organization and Extension cooperate in achieving mutual goals. Sometimes the members of the organization are learners. Sometimes they arrange for Extension agents to do the teaching.

Policy and Planning. Volunteers are involved in many advisory or planning groups related to Extension.

Cooperation with Other Agencies Although many people think of volunteers as being only laypersons, some of the most valuable volunteer activity is that done by agency personnel working together on major projects and programs.

Comparison showed that the various formats for volunteer activities often involved more than one task. For example, large events often involves all 18 of the tasks. Special assignments might involve any one or any combination of the 18 tasks explored in the Extension study.

Further thought about the various formats and tasks identified three major clusters of activities: teaching, supporting teaching, and policy and planning.

Teaching: group instruction, one-to-one sharing, exhibits, telephone responses to questions, media presentations, and supervising and training other volunteers. The study found that volunteers can affect learning in ways different from professional teachers. They are more available at the teachable moment. They may be seen as more conversant with the life situation of the learner, can help learners relax and enjoy learning, can increase learner confidence, can give learners more individual attention including guiding their initial use of new practices, and can serve as models in the uses of information. Volunteers also help agency staff learn about clientele, communities, and how instruction relates to local situations. In addition, most communities have a few volunteers who have academic and experiential backgrounds beyond those of the professional staff.

Support: organizing and coordinating events, promoting programs, recruiting participants, providing or securing funds and facilities, ensuring public support, organizing projects, completing surveys, and providing office support. Volunteers can do a great deal to promote programs and recruit participants. They also do a great deal to increase the credibility of the agent and its teachers.

Policy and planning: serving on an advisory group, committee, ad hoc planning group, board of an organization; or serving as the officer or leader of an organization. Volunteers can ensure that programs meet the needs and expectations of target groups within the community.

The Extension study concluded that:

- A full range of tasks should be available to volunteers. Some volunteers need more challenging tasks than others. Some want to use existing skills; others want to develop new skills.
- There should be variety and flexibility in volunteer programs, formats, and structures to fit the varied life situations of prospective volunteers. Some need individual assignments; others work better in groups. Some can work once a year; others can work each week.
- Volunteers and Extension staff should work together in attracting new volunteers. Just announcing programs isn't enough. The findings of the study suggest the following actions: emphasize value, ask people to do things, adapt programs to fit the way people can volunteer, emphasize learning, want to involve volunteers, set specific targets.

Partnership Rather Than Control

The study identified three possible relationships between Extension and volunteers:

Volunteer Control/Extension as Resource. In many instances a community organization controls the program, and a professional is only occasionally invited to serve as a resource person.

Extension Control/Volunteers Help. In some instances, Extension personnel control all of the decisions of the programs and direct volunteers as to what they are to do.

Partnership between Extension and Volunteers. Volunteers and Extension personnel share responsibility for the program.

Although there are times when either of the other two relationships is very appropriate, the Extension study concluded that the concept of partnerships should be emphasized. Partnerships are strongest when there is active and equal sharing. A mix of ideas from different perspectives often results in the strongest programs.

Why Should Adult Education Agencies Work with Volunteers?

Conclusion: The value of work with volunteers is so great for clientele, volunteers, and the community as well as the agency, that adult educators should consider extensive involvement of volunteers. Volunteers learn, and they help both clientele and agency staff to learn. Volunteering can be a major means of helping those involved meet personal needs and develop talents and skills. It can be a viable way of meeting upper level needs.

There were indications of substantial economic benefits, including the finding that the value of volunteer time, when valued at $8 an hour, was five times greater than the Extension budget. Community leaders felt that Extension volunteer activities improved communities and resulted in stronger organizations, more leaders, and more social or cultural activities. Volunteers felt that they understood their communities better.

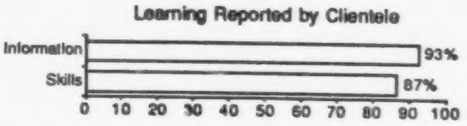
However, the strongest findings were how much volunteers, clients, and agents learned through the process of working together.

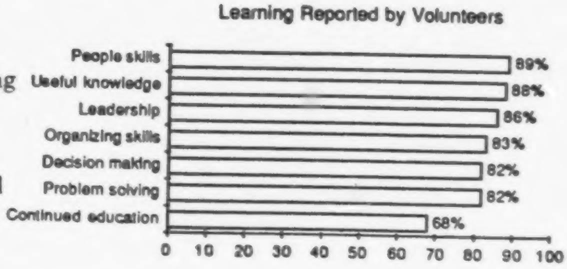
About 90% of the clientele said they learned information and skills from the volunteers.

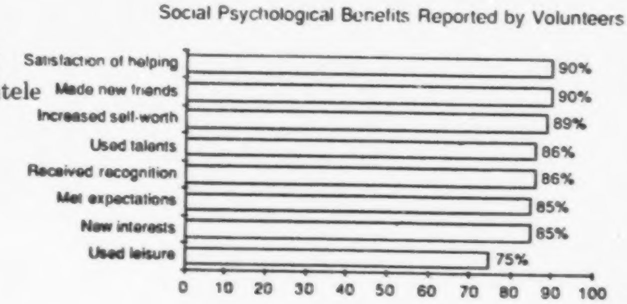
Volunteers learned more about the subjects they taught and also increased skills needed in working with others.

In addition, three-fourths of the agents felt that volunteers helped them to better understand people's needs and interests and to better understand local situations.

The second most impressive finding was the amount of social-psychological value which the work of volunteers had both for volunteers and clientele. Working with volunteers helped clientele enjoy life more, develop confidence and new interests, and feel better about themselves.


Learning Reported by Clientele


Learning Reported by Volunteers


Social Psychological Benefits Reported by Volunteers

Two theoretical analyses were made relating value and benefits to needs of adults.

Widmer Constructs Adapted. Finley (1987) using Widmer's model (1985) found the following benefit categories:

Social Gains: altruistic feelings; feeling of belonging; family enhancement.
Developmental Gains: knowledge, skills, self-esteem, self-actualization, job compensation, generativity.
Idealistic gains: family tradition, returning a favor, community obligations.
Material Gains: enhancing economic gains, opportunities or position, and/or employment opportunities.

Finley drew the following conclusions from her analysis:

1. A wide range of gains are received through volunteerism.
2. Volunteer activity can help individuals fulfill more than one need.
3. Some gains are more prevalent than others.
4. Volunteers' needs may change as their personal situation changes.
5. Individuals are likely to have a need different gains at various times in their life cycle.
6. Program coordinators should be cognizant of how volunteerism meets individual needs.

Maslow's Need Hierarchy. Maslow's hierarchy of human needs also was used (Edgerton and Steele, in progress). Some of the knowledge and skills gained clearly helped volunteers to meet physical needs and needs for safety and security. However, good volunteer experiences are a major means of meeting the intermediate needs of love/belongingness and self esteem and, for some volunteers, are a major way of meeting more advanced needs of self-actualization, the need to know, and aesthetic needs. This analysis concluded that by providing volunteer opportunities, adult educators can do a great deal to help adults meet higher level needs and to foster adult development.

The Extension study concluded that four groups gain from volunteers' working with Extension.

LOCAL VOLUNTEERS GAIN:

- information usable in other situations;
- increased skill in working with people;
- satisfaction from helping;
- greater understanding of their community;
- shared interests;
- opportunity to develop talents;
- new friendships.

EXTENSION ACHIEVES:

- stronger programs;
- more relevant and useful programs;
- greater influence;
- more people reached;
- more communities served;
- more programs active at one time;
- more clientele confidence in programs.

INDIVIDUALS GAIN:

- information;
- new ideas and help with problems;
- greater confidence in themselves;
- friendship and support.

COMMUNITIES GAIN:

- more leaders;
- more problem solving;
- greater cohesion;
- greater community interest.

The study also concluded that the human touch remains essential in helping people continue their educations and putting university-based information to work in their own lives. Extension-volunteer partnerships are just as essential in the future as they have been for the past 70 years.

Recommendations for enhancing the work of volunteers were grouped under the following main areas: strengthen partnerships, share between partners, focus on continuing education of both partners, expand programs, increase value to people and communities, and maximum investments.

Educational Significance: The Extension study findings substantiate and reinforce many established adult education principles. Sharing information on a one-to-one basis, working in small groups, giving the learner a feeling of ownership and satisfaction, were all very important factors to the learning accomplished by the volunteers, clientele, and agents in the study. When a volunteer works in partnership with the instructor, a stronger, more meaningful educational experience occurs.

The study documents that agencies and institutions which work through and with volunteers in delivering educational programs tap a great resource for increasing education coverage and impact. Volunteers extend an agency's budget and human resources. Volunteers make programs more relevant to the clientele and bring an additional dimension of meaning through their ability to attest to the usability of information from their own experiences.

This study only looked at the volunteers with one agency, but it would appear that volunteer partnerships with other adult education agencies could be equally useful. In general, Extension and other agencies may be underestimating the value of volunteering.

Agencies and adult educators should review and perhaps reconsider their view of how volunteers might work with their particular programs. Roles and tasks should be reviewed to see that they provide a variety of opportunities which will be attractive and helpful to volunteers as well as to the agency. Special attention should be given to involving volunteers in teaching as well as in support and policy/planning activities. Volunteer activities should be designed to meet varied concepts of adult education--information transfer, skill development, and self-understanding. In addition, many of the specific conclusions and recommendations made to Extension may also apply to other agencies.

Research Significance: The study: 1) demonstrated the value of applying some widely accepted adult education principles; 2) demonstrates the value of looking at the results of a program from several perspectives; 3) indicates that value may have many dimensions and may vary with respondents and perspectives; 4) demonstrates how quantitative and qualitative approaches can be combined; 5) suggests that more research is needed in relation to volunteering's role in adult development; and 6) suggests that more research is needed to examine the roles of professionals and volunteers with various clientele in selected kinds of contexts.

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Deaf Adults' Use of Social Networks to Overcome Barriers to Learning: An Exploratory Study

Ruth A. Verlinde
National Technical Institute for the Deaf
Rochester Institute of Technology

ABSTRACT

This study investigated barriers affecting deaf adult learners--a clientele which has traditionally lacked access to adult education programs. Ways in which deaf adults use their own social networks to facilitate learning were explored. The importance of networks for fostering adult learning among a hard-to-reach population was identified.

BACKGROUND

Rochester, New York, has attracted a higher number of hearing impaired persons per capita than any city in the United States. It has been described by many as a "mecca" for deaf individuals, because of two major educational institutions serving the deaf, services geared toward deaf consumers, and strong social networks within the deaf community. However, educational opportunities to serve this large population of deaf adults have been largely unavailable. The need for access to continuing education among this clientele is great, because deaf workers have so often been "unemployed, underemployed and likely to be passed over for promotion" (Higgins, 1980, p. 27). Schein, Delk, Lipman, Bowe and Freebairn (1976, p. 64) point out that "because so many deaf adults hold jobs as craftsmen and machine operators, there is a grave concern for their future [in a service economy]."

Deafness usually carries with it severe communication problems accompanied by lower levels of literacy skills. Since the deaf community's primary linguistic form is American Sign Language--ASL (conceptual sign language that doesn't follow grammatical rules), deaf individuals experience unique problems related to literacy (Nash and Nash, 1981). As a result of these communication difficulties, deaf adults tend to seek their own company, often relying on informal networks of friends and relatives to meet daily needs. This lack of interaction with the larger society, not only limits their ability to become fully functioning members of the community, but often fosters aspects of "handicapism" associated with feeling like an "outsider in a hearing world" (Higgins, 1980).

Deaf adults have lacked an active voice in shaping the focus of their learning activities, and have often been considered incapable of providing such input (Seidel, 1982, Costello, 1977). Similar to the illiterate adults described by Fingeret (1983), deaf adults are often frustrated by educators' attitudes toward them and have had little opportunity to describe their own goals and accomplishments. Deaf people have often been isolated and misunderstood because of their language difficulties, confronted with discrimination, and subject to such stereotypical perceptions as "handicapped," less capable, or "deaf and dumb."

In order to develop effective programs for deaf adults, more knowledge is needed about how learning is sought and achieved either formally or informally, within the deaf community. To facilitate learning among this population, program planners need to acquire greater insight into means that deaf adults have devised to overcome some of their perceived barriers to participation in traditional educational programs. According to Brookfield (1985, p. 48), adult education should be a collaborative enterprise between teachers and learners where, "attention to increasing an adults' sense of self worth underlies all educational efforts."

PURPOSE AND SIGNIFICANCE OF THE STUDY

The purpose of this study was to conduct an in-depth, exploratory investigation of a sample of deaf adults in the Rochester community regarding their perceptions, insights and experiences with traditional educational programs, and the alternatives they have devised to meet their learning needs. The study sought information regarding: 1) Characteristics of deaf adults, 2) The functioning of networks within the deaf community, 3) The relationship of members of the deaf community to the community at large, 4) Current learning activities, 5) Barriers to participation in traditional educational programs.

Since most adult educators experience difficulty communicating with this clientele, program development efforts have usually relied upon third party information, questionnaires, or interviews which include interpreters. This study, by contrast, was conducted by a researcher capable of using communication modes which are unique to the deaf community, and thus, was able to record the ideas and perceptions of respondents expressed in their own words.

METHODOLOGY

This study was conducted using the qualitative research method of semi-structured, open-ended interviews. The hour length interviews were conducted using several modes of communication, with sign language being the primary mode. The unique aspect of this study's methodology was that the interviews were videotaped using a small video camera. Videotaping was employed as a method of developing a non-intrusive interview session, and was essential for the researcher to be able to set up one-on-one interviews in which the ideas of the respondents could be captured. By videotaping the interviews, the researcher and respondent were able to communicate both in speech and sign language without the aid of an interpreter. Seidel (1982, p. 141) notes that the use of videotape has unique value to sociological research on deafness, because during interviews when sign language is used, the "hands and eyes are the medium of communication...they are not free for note taking." Audio tape recording procedures were not useful, since the voice quality of deaf respondents varies, with some individuals using no voice at all.

The videotape method provides the only means of recording deaf respondents' ideas, meanings and gestures, so that their perceptions could be translated and incorporated into the report of research findings. The researcher used the videotape later to translate the sign language into standard English as part of the creation of the interview transcripts.

Access to the deaf community was obtained through leaders of networks or organizations who were contacted for input regarding community networks prior to the onset of the study. Respondents were initially obtained through use of four social networks: a church affiliated group, a group of elderly deaf people, a school alumni association and a womens' network. The researcher had an intermediary or contact person within each of these four networks to serve as an advocate for her and to gain entry into the various groups.

Two major matrices-- a Barriers to Participation Matrix and a Networks Matrix-- were developed and used to assist the researcher in identifying emerging themes and trends evident in the study. Analytic categories for the Barriers to Participation Matrix-- Situational Barriers, Psychosocial Barriers, Informational Barriers and Institutional Barriers were drawn from categories described by Darkenwald and Merriam (1982, p. 136-140). Demographic characteristics of deaf adults were arrayed along the other axis of the matrix. The Networks Matrix provided a framework for examining the relationship between deaf adults' learning tasks and networks as facilitators of learning.

DESCRIPTION OF THE DATA

Data for this study were generated through in-depth interviews of twenty-five respondents -- nine men and sixteen women. Ages of respondents spanned from early adulthood to one individual who was seventy-seven years old. Educational backgrounds of respondents ranged from individuals with little formal education to those with college degrees.

Respondents' participation in networks varied, with some being more active than others. All were involved in at least one network, and many were in several groups or organizations. Friendships and associations between and among networks were extensive.

The primary function of networks was to assist individuals with life coping skills. A major theme that emerged was that most respondents, except for the most isolated, depended on networks to provide information and to fulfill learning needs that were not being met elsewhere. Respondents often mentioned that they "needed to know what's going on" regarding available community resources and services, including education. They felt they needed more information to help them keep safe and well, especially medical and emergency information. Such informational barriers were reported by most respondents, especially retired people and housewives who lacked network contacts.

Networks helped individuals obtain information relating to parenting, taxes, health, and other issues important to survival, and provided support for coping with such significant life transitions as divorce, bereavement and aging. They also facilitated the exchange of information in lieu of more formal information systems such as radio and television news.

Networks played a unique role in facilitating adult learning. Self-identified learning needs, such as parenting and home and family issues, were handled within the network setting through individual self-directed learning, formation of self-help groups, workshops and other activities. Network-sponsored learning activities provided deaf adults with an opportunity to plan and control the content, timing and delivery of their education. For respondents, who often reported having felt alienated, "left out," and looked at differently within educational settings, the opportunity to take control of their own learning provided an avenue for development of self worth and personal empowerment. The shared dialogue within these supportive groups fostered a sense of fellowship which helped individuals to overcome the frustration, fear of failure and other psychosocial barriers that they had experienced in more traditional settings.

Most respondents believed that the shared networking activities had an informal give-and-take aspect. Individuals provided each other with help and support in exchange for other needed services. The reciprocity possible within networks contradicted the "deficit perspective" associated with handicapism and provided deaf adults with a sense of equality and sufficiency within their own community.

Beyond life coping skills, deaf adults identified a wide variety of learning needs and interests, such as computers, karate, advertising, home decorating, political processes and personal finance, not unlike the general population. Many of these needs could not be met through social networks. In seeking educational services from the larger community, deaf adults were confronted with more intractable barriers, some of them institutional and others associated with lack of money.

A major theme that emerged was that "deafness is expensive," not only for equipment, hearing aids, interpreters, security systems and the like, but also in lost wages and foregone promotion opportunities. The expense of being deaf was a situational barrier created by loss of time, because it "takes longer to do things," fatigue and loss of energy from having to work so hard to cope with daily demands, and lost mobility. Deaf women experienced the "double jeopardy" of deafness coupled with perceived social roles indicating that the woman's place is in the home, not the workplace. Many respondents felt that because of family, childcare and job obligations, they could not afford to pay for further education, either to fulfill personal interests or to advance their careers.

Economic concerns were a primary concern for the respondents, because even though as a group they had achieved higher levels of education, they tended to be underemployed, underpaid and frustrated in their efforts to advance themselves. Frustrations in the workplace associated with perceptions of discrimination and lack of opportunity for advancement, coupled with isolation and difficulties communicating with co-workers, created feelings of helplessness, anger and a general view of a limited and tenuous future in the job setting. In the face of these obstacles, many individuals did not seem to believe that further job training or career education could help them out of this dilemma. Some of them felt that their earlier efforts to acquire education and training had been "wasted." They were not convinced that there would be a pay-off for further learning activities and were more concerned with "hanging on to what they've got." Until they were able to see a relatedness between job acquisition and improvement and continuing their education, these deaf adults were reluctant to participate in further education, especially if they had to pay extra for it because of their deafness.

Those who had attempted to participate in formal educational activities were confronted with such institutional barriers as lack of interpreters, childcare or flexible schedules. They reported that many of the frustrations they faced, such as teachers who were insensitive to or unaware of deafness, lack of interaction with classmates, feelings of embarrassment or inability to participate in class, were similar to experiences they had had in earlier educational situations. Negative prior learning experiences were a psychosocial barrier which caused many respondents to be reluctant to reenter traditional lecture or group sessions.

A major emerging theme was an informational barrier associated with respondents' lack of basic information regarding politics and voting rights and procedures. The issue of voting inactivity and political powerlessness tied into the theme of discrimination and disenfranchisement which had been identified. The inability to get timely information from the larger society through such means as radio and captioned television news was a barrier perceived by many respondents as a limitation to their active participation in social, civic and political matters. Several respondents reported that they had been exposed to very little information about voting and political activity when they were in school, and were presently not involved in political life. Some of them had never voted in a local or national election and felt that they didn't know how to do so, or that it was not "worth it" anyway.

CONCLUSIONS

There is much that needs to be done to modify and expand formal education programs that would help deaf adults understand, and take control of improving their own situations, in order to work toward changes in society that will provide them with more equitable opportunities for both educational and economic success. Educators can play a significant role in helping to empower deaf adults to become active participants in shaping their own futures and that of the deaf community. Educators have a role to play in fostering civic responsibility and involvement among this clientele and to help build linkages with business and industry so that deaf adults can be aided in gaining skills to obtain employment and advance on the job.

For deaf adults, informal networks have often been more successful in fulfilling their learning needs than formal educational programs. Drawing on the power of networks requires sharing of that power with the individuals being served -- a recommendation that emerged from this study.

Initial assumptions that communication difficulties were the major barrier to participation were unfounded. Barriers that need to be alleviated include such problems as financial issues, childcare, and cost of courses with interpreters. Educators and deaf adult learners must work collaboratively to develop learning activities. Program development recommendations should be based on the insights and perspectives of deaf adults themselves, and build upon the methods which deaf adults use in networks to facilitate their own learning.

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Community, Distance Education and the "Robin Hood Principle":

A Case Study of the Key Actors in the Process of Introducing a Distance Education Innovation into a Community

R.M.K. Wagner and W.B. Whale

Abstract

In this study the authors examine the implications for one community of introducing a distance education innovation that makes access to university courses equitable to communities regardless of their size. University and community people who were key to the project were interviewed to assess the effectiveness of university attempts to orient the community. The authors conclude that the introduction was partially successful even though the rationale was not yet fully accepted by community respondents. The study concludes with a series of questions emerging from the observations.

Background

In this study the authors examine the implications for one community of introducing a distance education innovation that makes access to university courses equitable to communities regardless of their size. The general purpose of the study was to evaluate the effectiveness of the innovation's introduction to the communities involved with particular focus on the community which had the largest number of students eligible for university courses and the longest history of commitment to the conventional delivery methods for university courses.

The innovation involved the delivery of introductory English and History throughout the province using weekly televised insructor-student interactive lectures, local discussion sessions supported by a proctor or tutor, a study guide, a course outline and textbooks. It was received in nine of a possible fourteen communities in the province participating in a telecommunications network consortium.

Three roles at the community level were considered to be key to the successful implementation of the innovation. They were: community *college coordinator*; the community *college administration*, the principal and assistant principal who were responsible for policy formulation; and the *tutor or proctor* appointed by the university to provide student support. People in four different roles within the university had responsibilities for advising the community people about the project, the rationale for the project, and the roles to be performed in the project as follows: the *instructor* regarding the course content, how the content would be presented and the expectations of tutors and proctors with regard to their relationship to the instructor; the *course designer* regarding the role and responsiblity of tutors and proctors to achieve the objectives of the course, with particular reference to the process to be used; the program *administrators* with regard to student questions about how administrative matters would be handled; and, the *senior administrators* with regard to university policy and long term implications of the innovation for university/community college relationships.

The study undertook to determine whether the rationale and the processes for introducing the innovation and for orienting the people to their roles considered the factors necessary to have the people involved accept the innovation and effectively fulfill their responsiblities in it. It was assumed that the success of the project would be determined by the effectiveness with which each of the roles at the community and the university levels was performed.

Method

There were two primary sources of data: records of the rationale for the innovation and the actual processes used both to introduce the innovation and to orient each of the key people to his or her role; and, the people who performed the key roles in both the university and the community. Since the roles were interdependent, the respondents were asked to provide information about their perceptions of: a) the project and its rationale; b) their roles; c) the roles of other key participants; and, d) the performance of other key participants in their designated roles. Twelve university participants were interviewed: the English and History instructors (2), course designers (2) and television producers (2); the executive director of the telecommunications consortium; university administrative staff at the operations level (3); and university administrative staff at the policy level (2). In the community under study, the five participants interviewed included: the college coordinator; the tutors (2); and, the administrative staff at the policy level (2).

An interview schedule was developed to guide the collection of information which permitted the interviewers to probe for data. The interviews were conducted by the authors and an experienced interviewer trained by the authors. The outside interviewer was assigned to interview the tutors, proctors, associates of the authors, and the authors themselves. Community interviews were conducted by telephone while university interviews were conducted in person. The average duration of the interviews was one hour.

Data Analysis

Information from the interviews was entered verbatim into a computer data base with descriptors assigned to allow sorting by question (or probe); by question (or probe) category (ie. contextual, rationale, etc.); by interviewee role type (ie. instructor, designer, college principal, etc.); and by the role type of the individual being described in the response. Data were systematically examined for patterns emerging which related to the success of the community orientation to the innovation.

Results

The Community

Historical Perspective

Historically, the community upon which this study focussed has had a well-established university tradition without the actual presence of a university or junior college. For more than seventy-five years a string of respected community citizens have participated in a succession of lobby groups and community organizations with the expressed objective of improving the quality of education and higher education in the community. For example, an active but unsuccessful group of citizens lobbied in the early years of this century to convince authorities to locate Saskatchewan's first provincial university in their community.

Over the past decade higher education within the community has been formalized through a provincial community college designed to "broker" university credit courses with travelling instructors from both provincial universities and local qualified citizens as university instructors. In 1985 the University of Saskatchewan and the community college lauched a joint off-campus program to enable local residents to complete the first two years of Arts and Science without leaving their community. Travelling and local instructors were to be used for the higher enrolment classes with distance education (most often in the form of correspondence), as the delivery system for classes with fewer students. After the first year, the program was so successful that other community colleges and communities throughout the province demanded similar programs. One unsuccessful aspect of the program in the study community was that *distance education delivery systems available from the University of Saskatchewan were not employed by the college.* Rather the college in the study community continued over a three year period, to pressure the university to increase the number of university subsidized face-to-face classes until more than fifty percent of the university's provincial quota for face-to-face classes was dedicated to the study community. Consequently, a shortage of both university faculty in introductory subject areas and subsidy budget prohibited expansion of the full program to other communities in Saskatchewan.

As a result of these developments, the University of Saskatchewan introduced the distance education innovation reported here in order to provide greater access to quality university instruction by *all* Saskatchewan residents on an economically feasible basis--thus initiating a key principle in the innovation referred to here as the "Robin Hood principle." Consequences to the study community included role changes for people involved in the delivery of the traditional face-to-face classes and the loss of significant revenue from traditional high enrolment classes--revenue which had been used prior to the introduction of the innovation by the college to subsidize other courses and programs in the college.

Orientation to the Innovation

Community orientation to the innovation occurred in two phases: a) up to six months prior to the actual implementation of the innovative courses; and, b) after the courses had commenced in the Fall. Within the first phase elements of orientation designed especially for the study community included: 1) meetings at the *policy level* to initiate the innovation; 2) maintenance of an on-going administrative "conduit" for information exchange at the *operations level* ; and, 3) *academic liaison* to develop academic support resources in the community. Also within the first phase, system-wide orientation for all participating communities in the province included: the development and the extensive distribution of a descriptive brochure; advertisements for prospective tutors and proctors in the main daily papers; television advertisements for student participation; letters to the various community college coordinators and the prospective tutors and proctors; and, an orientation session for tutors and proctors with an invitation to the community college coordinators.

During the implementation, informal but specialized orientation for the study community occurred as a result of weekly tutor-instructor telephone consultations. System-wide, several telephone conference calls were initiated between the instructor and the tutors. In addition, the designers contacted the proctors and tutors individually.

Community Sensitivity to the Innovation

Table 1 below summarizes the character of Saskatchewan communities involved with the innovation and their initial reactions to the innovation as reported by the respective interviewees after two months of implementation. The community reported here is identified as community #1

Table 1: Reaction To Innovation by Actors in Receiving Communities

Rural-Urban Character ---	---Urban---		------Urban/Rural------				------Rural------		
Community Identification---	#1	#2	#3	#4	#5	#6	#7	#8	#9
Total Students Registered ---	108	3	71	72	21	2	21	12	5
Community Actors Interviewed ---	5	2	4	4	4	4	3	4	2
Initial Reaction:									
positive	0	1	4	2	2	2	3	4	1
negative	5	1	0	0	0	1	0	0	0
neutral	0	0	0	2	1	1	0	0	1
no response	0	0	0	0	1	0	0	0	0

in Table 1. The initially negative reaction in the study community compared the more positive reactions reported from the other communities, serves to illustrate the study community's particular sensitivity to the innovation.

Participant Reports

Patterns emerging from the data for the study community fall into three general categories related to: the project rationale; changes which were documented; and, the respondents' perception of key actor roles.

Rationale

The rationale for the innovation was "to provide greater access to quality university instruction by *all* Saskatchewan residents on an economically feasible basis." The university would assume direct costs normally picked up by the community college in exchange for all of the tuition revenue. The college stood to lose revenue previously earned from the two high enrolment courses--revenue which had been used by the college to subsidize other courses and areas. The changes meant that the revenue would be used by the university to off-set costs associated with providing "greater access for residents of the province" including people living in smaller communities *previously without access*; thus, implementing what is referred to here as the "Robin Hood principle."

Evidence from the reports of all five of the community respondents suggests that the rationale for the innovation and its implications for the community and the province **were understood by all of the respondents but not supported by them.** For example, three community respondents described their initial understanding of the rationale to be one of "improving student access (to the university) on an economically feasible basis" while two respondents reported their understanding of the rationale as "developing more control for the university." Three of the respondents reported questioning or challenging the rationale. It is reasonable to conclude therefore, that all five respondents from the community had concerns over the **shift in the locus of control** for the university courses away from the community college and toward the university through changes in budget control. It is also reasonable to speculate that the replacement of classroom teachers with university-located teachers and classroom tutors (which meant a role change for former teachers who were employed as tutors) may have prompted a concern for shift in control in the instructional sense. Evidence to support the latter is derived from the reports of five of the twelve university respondents who reported that they felt that the tutor(s) had experienced considerable difficulty in adapting from the conventional classroom teacher role to the expected tutor role.

Changes Observed

In the analysis of the data from the five community interviewees, three changes were observed. The first involved a reported attitude change from **negative to more positive** which occurred from the time when the community respondents were first contacted to when the interviews were conducted two months after the courses had commenced. All five individuals reported an initial negative reaction to the project; however, at the time of the interviews, two individuals expressed a positive reaction to the project while three individuals expressed a mixed or neutral reaction to the project. The second change emerged from reports by four of the community respondents that after their initial receipt of information about the project they experienced a **delay of from one to four months in their formal commitment** to participate. The fifth individual had not been engaged by the university until after the courses had commenced. Her formal role began immediatly after contact. The third change emerged when three community interviewees reported experiencing **changes in their roles after their formal commitment** to participate in the project.

It would appear that the initial negative positions reported unanimously by the community interviewees which set the community aside as being extra-ordinarily sensitive to the innovation (see table 1), were in response to initial meetings with university administration during and after which the respondents recognized a shift in the locus of control for the courses away from the community college and towards the university. The subsequent period up to the time when the respondents recognized their formal commitment to a role with the project coincided with the shift in attitude toward the project. One explanation for the simultaneous shift in attitude and role commitment may be that during the intervening period the community respondents were able to use the project information at their disposal to clarify their understanding of the project itself and their role in it. Evidence of the latter is that all five interviewees reported that at least some of their questions about the plan *were answered* (by the university administration) by the time they were committed to participate. However, it is apparent that the information provided did not answer all of the questions related to roles in the project. For example, three of the community people reported that they *did not receive satisfactory answers* to specific questions they had about their roles until after they were committed to participate. At the time of the interview, however, the respondents reported that their questions had eventually been answered by either the university administration or through personal experience in the role.

Role Perception

Analysis of the perceptions of key roles in the innovation was based on data drawn from interviews with twelve university respondents and the five community respondents. The analysis revealed both **similarities** in role perception (and role performance) between the reports of the community respondents and the reports of the university respondents ***and* differences.** The university and community respondents generally tended to agree in their understanding of key aspects of the roles of the proctor, the tutor, the college coordinator, the instructor and the university administration. They also agreed that the instructors performed their roles well. However, there was little agreement between the community and the university respondents as to how well the other roles were performed. While there was no meaningful response from the community respondents for most of the roles, the respondents from within the university felt that: the tutors "experienced difficulty adapting to their new role"; the college coordinator was "biased, apathetic and actively resisted the innovation"; and both the designers and university administration "performed well." Three of the community respondents, however, felt that the performance of the university administration was "inadequate."

Differences observed in reports from the community respondents and reports from the university respondents related to their understanding of the various role, are summarized in table 2.

Table 2: Role Perceptions: University-Community Differences

Actor	Responsibilities Perceived	University Sources	Community Sources
proctor	university-student liaison	X	
proctor	local course adm. detail		X
college coord.	university-college liaison		X
college admin.	approval and supportive attitude	X	
college admin.	adm., plan, policy devel., budget		X
college board	community /political support		X
instructor	interaction with individual student	X	
designers	team with instructors & mediation	X	
univ. adm.	community-university relations		X
univ. adm.	plan, policy devel., budget, inform	X	

Half of the community-university differences in perceptions relate to university-community "bridging" such as "university-student liaison", "university-college liaison", "interaction with individual students", "community-university relations" and the college administration's "approval and supportive attitude." It is reasonable to conclude from the above that both the community and the university respondents appreciated the need to have extensive "bridging" mechanisms between the community and the university but that there was little agreement as to which role had the "bridging" responsibility.

Summary

The introduction of the innovation was at least partially successful in that positive changes were documented in both attitude and roles in spite of a perceived shift from the college to the university of control over the course. Efforts to orient key participants in the community to the project rationale and their respective roles, were partially successful. The university and the community agreed that the instructors performed their roles well and that there should be bridging mechanisms between the university and the college; however, the two disagreed on which roles should incorporate "bridging" responsibilities. Other difficulties included: unacceptance of the rationale; some unanswered questions prior to commitment to participate; and, university-community disagreement on how well the university administration performed its role.

The findings raise a number of questions: What is required to help the key community participants view "university access" in terms which go beyond the needs of the residents in the study community to include residents of other smaller communities? Are some community participants more important than others to ensure the adoption of the innovation reported here? What proportion of the concern for "shift in control" resulted from the distance education medium shifting conventional classroom and teaching "control" from the community to the university? Why did both the college and university respondents adopt "situational" definitions for the roles of their respective administrations where each defined *the other's role* in terms of "what was needed to support the innovation" but defined *their own role* in formal terms related to "planning, budget, policy development"? Did those key participants in the community for whom there were unanswered role questions, have access to the appropriate information but require personal assistance in its translation to their respective roles?

Instructional Strategies and Attitudes as Factors in Learning Outcome for Adults Enrolled in a Legislatively Mandated Educational Program

Barbara A. White
Center for Adult Learning Research
Montana State University

Abstract: The primary purpose of the study was the investigation of the teaching-learning transaction by determining the effect of selected instructional strategies on learning outcome of adults enrolled in a legislatively mandated program. A secondary purpose was the investigation of factors which might affect learning outcome, including attitudes and personal descriptors identified as age, level of education, and years in the mandatory program.

Introduction:

Major effects of technology, social and economic changes, political developments, and the increasing amount of available information are cited by Cross (1981) as impetus for adults to seek out and participate in learning opportunities of all types. A specific issue of concern originating from social and political pressures, identified as mandatory education, has influenced the need for licensing, certified licensing, recertification, and continuing education via short-term, and/or one-time educational opportunities. To accomodate for such a variety of existing needs, organizations fostering the education of adults have become providers of formal and non-formal educational activities as well as managers of the instructional process.

Personnel employed by a nonprofit educational service provider, such as the national Cooperative Extension Service, are faced with a dilemma not uncommon to many educators of adults, that of being unprepared for designing learning experiences appropriate for meeting adult learner needs and objectives. Characteristics identifying diverse learner participation including rural or urban residence, mandatory or voluntary attendance, political involvement, continuing coursework or one-time exposure, or previous experience provide additional pressure for the adult educator to develop methodologies and strategies appropriate for meeting learner needs. In addition to learner diversity, considerations allowing for the effectiveness of the teaching-learning transaction are also of concern. An understanding of the conceptual assumptions of the andragogical and pedagogical models of learning suggest that the adult educator must be cognizant of the part each model plays in the overall educative process with special attention directed toward the implementation of the concepts as instructional methodologies. A procedure or strategy suitable for one group of learners may be inappropriate for another group. Educators of adults must be sensitive to the fact that they are working with a wide variety of people, that strategies are important, and that the proper selection and use can mean the difference between ineffective adult education and that education which actively involves the learner, stimulates the learner to seek more knowledge, and achieves the specific goal for which the strategy was designed.

Statement of the Problem:

Given the diversity of adult learners, the conceptual framework of andragogy and pedagogy characterized as methodologies of instruction, and the nature of a legislatively mandated educational program, the problem of this study was two-fold. The initial part of the problem was to determine if a difference exists in learning outcome between two groups of rural adult learners, identified as private pesticide applicators, receiving educational information by one of two instructional strategies, Lecture or Small Group Discussion. Both groups were enrolled in a legislatively mandated pesticide recertification program. The second part of the problem was to determine if a relationship exists between the dependent variable of learning outcome and the independent variables of: (1) instructional strategy received, (2) applicator attitude toward mandatory pesticide education, (3) applicator attitude toward instructional strategy received, and (4) personal descriptors of age, level of education completed, and years in the recertification program.

The study involved five requalifying sites providing the legislatively mandated pesticide recertification program to approximately 1,100 private applicators in District V of the state of Montana. The study was conducted during the months of February, March, and April of 1987 with the cooperation of the educational service provider, the Montana Cooperative Extension Service, and the licensing agent, the Montana Department of Agriculture.

Methodology:

The present study employed a quasi-experimental approach, defined by Wiersma (1986, p. 139) as involving "...the use of intact groups of subjects in an experiment, rather than assigning subjects at random to experimental treatment". The research design can be described as a posttest-only, non-equivalent multiple-group design, in which selected groups of pesticide applicators received an experimental treatment (Lecture) while other groups participated in a second experimental treatment (Small Group Discussion).

Approval of the study design was secured from the administration of the Montana Cooperative Extension Service during the fall of 1986, in addition to the assistance by the county personnel conducting the recertification programs. A total of 654 private pesticide applicators, representing five requalifying sites in an eleven-county recertification district, comprised the final study population.

With the primary purpose of the study the investigation of the effect of selected instructional strategies on learning outcome, it was necessary to assign a specific instructional strategy to each of the participating requalifying sites. Estimated applicant participation was used in assigning the strategies. Also, a key factor was the availablity of facilities suitable for accomodating the strategy of Small

Group Discussion, which would ultimately result in the division of one large group into multiple groups of seven-to-ten participants.

In the state of Montana, private pesticide applicators must be recertified every five years by acquiring additional hours of training or by written examination. Seven criteria, established by the Environmental Protection Agency, comprise the original criteria to meet minimum standards for initial licensing and requalifying for continued licensure. One of the criteria is Pesticide Safety. Using a Systems model from the instructional design literature (Dick, Carey, 1985), a Lecture format and a Small Group Discussion approach, implementing a case study format, were developed by the researcher with the identification of the goal, objectives, criterion-referenced evaluation, and implementation schedule identical. The point of differentiation within the Systems model was in the selection and implementation of the instructional strategy and instructional medium. In the case of the Lecture format, the researcher provided the delivery of the subject-matter content to each of the sites designated to receive Treatment 1; participants numbered 461. For the sites designated Small Group Discussion, plans were made for the researcher to meet with volunteer peer discussion group leaders prior to the scheduled recertification program. The purpose was to provide materials and an orientation to the strategy of Small Group Discussion, using the case study format. Participants involved in the latter strategy numbered 193.

Data Collection Process:

All private pesticide applicators requalifying for licensing by participating in the recertification program must demonstrate practical knowledge of pest control principles and the safe use of pesticides. In the present study, the dependent variable of learning outcome was identified as the variable representing the demonstration of practical knowledge. A twenty-item, forced-choice examination identified as the Pesticide Recertification Exam: Safety (PRES) was used to measure learning outcome. The independent variables included:

(1) instructional strategy, identified as Treatment 1 (Lecture) or Treatment 2 (Small Group Discussion),
(2) attitudinal variables identified as Attitude Toward Mandatory Pesticide Education and Attitude Toward Instructional Strategy Received, measured by an eleven-item Likert scale labeled Attitude Toward Mandatory Pesticide Education/Instructional Strategy Scale (AMPE-ISS), and
(3) personal descriptors identified as Age, Level of Education Completed, and Years in the Recertification Program determined by the use of a General Information Questionnaire.

The order for the data collection process involved the completion of the General Information Questionnaire at the beginning of the six-hour mandated program. Following the component of Pesticide Safety, involving the implementation of the two instructional strategies of Lecture and Small Group Discussion, completion of the Pesticide Recertification Exam: Safety and the attitude questionnaire was requested.

The data collection process was designed to help develop a profile of the study population in addition to answering six research questions. Selected findings are presented below.

Applicator Profile:

Private pesticide applicators were categorized as farmers and ranchers by occupation. The subjects ranged in age from 18 to 83 with sixty percent (60%) between the ages of 31 and 55 years with a mean age of 41.37 years. Fifty percent (50%) of the respondents had completed one-to-four years of high school while 41% had completed one-to-four years of college. Ninety-six percent (96%) of the applicators had lived within their resident county six-to-ten years with fifty-six percent (56%) having participated in the pesticide recertification program for seven years or more.

Research Questions:

(1) What is the attitude of rural adult learners toward a legislatively mandated educational program?

Descriptive findings indicated sixty-eight percent (68%) of the respondents would have voluntarily participated in the program had it not been legislatively mandated. Forty-five percent (45%) of the applicators responded in favor of the mandated program, while thrity-seven percent (37%) disagreed with the mandatory requirement.

(2) What is the attitude toward the instructional strategy received?

Ninety-one percent (91%) of the applicators were favorable to the strategy they received during the pesticide program. Eighty percent (80%) believed their prior experience did not eliminate the need for the safety information while sixty-six percent (66%) did believe their experience was sufficient to answer questions. Ninety percent (90%) indicated they would use the instructional materials provided and would like more help in the future.

(3) Do variables such as attitudes and personal descriptors interact with each other relevant to the instructional strategy implemented?

(4) Does the instructional strategy implemented make a difference in learning outcome of pesticide applicators?

A two-way Analysis of Variance revealed no significant interaction between the individual variables. However, a significant difference was found to exist among the mean scores on learning outcome for the main effect of attitude toward instructional strategy received. Also, a significant difference was found to exist among the mean scores on learning outcome for both the main effects of instructional strategy and level of education completed. A significant difference also existed in the test for main effects among the independent variables of instructional strategy and years in the recertification program, with the difference occuring between the mean scores on the measurement of learning outcome for the two instructional strategies implemented.

(5) Do relationships exist between the learning outcome of adults enrolled in a mandatory setting, and the instructional strategy used, attitudes, or personal descriptors of the learner?

The product moment correlation coefficient analysis resulted in the identification of two significant relationships. Pesticide applicators' attitude toward mandatory pesticide education was positively correlated with scores on learning outcome. Those with a more positive attitude toward the legislatively mandated pesticide program tended to earn a higher score on learning outcome. The second finding identified a positive correlation between the level of pesticide applicator attitude toward the instructional strategy received and the performance on the measure of learning outocme. As the level of attitude toward instructional strategy became more positive, the performance on the measure of learning outcome also increased.

(6) What is the relative contribution of the instructional strategy, attitudes, and personal descriptors in the prediction of learning outcome?

Using a stepwise multiple correlation procedure, two independent variables were identified as contributing significantly to learning outcome of pesticide applicators. These variables were identified as attitude toward instructional strategy received and years in the recertification program.

Conclusions:

Caution is necessary in generalizing to other populations of pesticide applicators outside the region in which the study was conducted due to regional differences and the variety of learner needs in a rural setting. In addition, the variety of applicator programs administered by the individual states compounds the concern in generalizing the findings. The following conclusions have been drawn, however, from the present study:

(1) The descriptive profile of the rural adult learner in the present study suggests a younger occupational group with more years of formal education than noted in earlier studies (Treadway, 1984). The findings do substantiate, however, the suggestion in the literature that by the year 2000, the largest age group will be 30 to 44 years old. In the present study, sixty percent of the population were in the age group of 31 to 55 years with a mean age of 41 years.

(2) Descriptive data analysis indicates that sixty-eight percent of the 592 respondents would have participated on a voluntary basis had the program not been legislatively mandated. The finding suggests the importance of the program content, relative to the occupational safety of the applicator, as being the primary concern rather than the question of mandated participation.

(3) Applicator response to the question regarding the legitimacy of mandatory education resulted in forty-five percent of the 588 respondents in agreement with the concept of mandated pesticide education, suggesting that participants do not hold as negative an attitude toward the pesticide program as assumed by the licensing agent and the educational service provider. It appears that administrators of the program may want to consider the findings as a possible indication of the willingness to "voluntarily" participate as compared to the need for a government statute. In addition, responses relevant to the role played by experience suggest that pesticide applicators have identified the need for the program and are willing to attend, and believe that their experience, although sufficient to answer questions, does not eliminate the need for the program. In this case, the assumptions underlying andragogy, i.e., the concept of self-directedness, experiential learning as a basis for further learning, and a focus on immediate application suggest the possible reassessment of the legislatively mandated program.

(4) The nature of the positive attitude toward the instructional strategy received and the role played by instructional strategy relevant to learning outcome suggests the feasibility of at least two strategies to assist the service provider in accomodating for some of the diversity in learner characteristics. It is, however, a conclusion of the researcher that the use of a Systems model for the initial design and development of both instructional strategies, representing two philosophical orientations, played a key role in the resulting positive attitude toward the instruction.

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TENANT MANAGEMENT: A STUDY OF EMPOWERMENT THROUGH A PARTICIPATORY RESEARCH PROJECT

Lewis E. Wright, Ed. D. Candidate, Northern Illinois University

Abstract: Two nontraditional adult education models, participatory research and technical assistance were utilized and examined separately among two groups of Chicago public housing residents. Participatory research was found to be the preferred strategy for low-income urban adults seeking empowerment.

INTRODUCTION

In the past two decades, adult educators have begun to examine certain efforts being made by minorities, women, the poor and other marginal groups to gain control over their own lives (Hall, 1979). Education and training have been seen by some as major avenues through which these groups can achieve their aims. Yet, the utilization of conventional methodologies of adult education, research, and training have resulted in less than satisfactory results. To overcome this deficiency, one of those groups, public housing residents, has begun to provide new insights into training by encouraging its members to seek control through management of their own housing developments. This new effort, tenant management, presents an opportunity to examine the effectiveness of participatory models. Through participant observation, two such models that existed within Chicago public housing were assessed in this research.

The first group to be observed was composed of residents of LeClaire Courts, a low-rise, low-income public housing development located on the western edge of Chicago. Later in the study, a second group of public housing residents at Dearborn Homes expressed an interest in tenant control and became a part of this research. Dearborn Homes is located on the south side of Chicago amid a row of other public housing developments. The similarities and differences in strategies used by the two groups constituted the basis of data collection for this investigation.

The approach to tenant management at each of the sites had five characteristics that distinguished it from the other approach. At LeClaire, which represented the technical assistance model, the following characteristics were seen: (1) needs identification, (2) goal identification, (3) formation of links to the external community, (4) fact-finding trips, and (5) training. The effort at Dearborn, however, was seen to be very close to the participatory research model, and was characterized by five different steps. These were: (1) a learning stance, (2) problem posing, (3) assessing strategies and resources, (4) problem solving, and (5) evaluation and documentation.

In order to accomplish the aims of this research, three questions were developed. They were designed to discover the extent to which participatory research is effective as an empowering approach to be used by adult educators who seek to assist low-income persons who are beginning to help themselves. The three questions were:

1. How does participatory research differ from a technical assistance model for developing resident management in public housing?
2. What are the strengths and weaknesses of each model?
3. Is participatory research more viable than technical assistance as an adult education strategy for low-income adults to empower themselves?

METHODOLOGY

LeClaire Courts

The LeClaire Courts group was assisted by officials of the Clarence Darrow Community Center and consultants from the University of Illinois-Chicago's Voorhees Center. These two institutions were instrumental in the planning, initiation, implementation, and evaluation of the LeClaire tenant management program.

To serve the best interest of the program, the Darrow and Voorhees people felt that a body of persons with expertise in several related areas was needed. Thus, an advisory board was formed that consisted of all the principal participants at LeClaire Courts as well as representatives from other business and social institutions in Chicago. The advisory board, then, was an establishment oriented body that tended to influence, if not control, the activities carried on by the residents.

Recognizing the need to clarify their own objectives in terms of a resident control program that would be congruent with their development, the LeClaire residents began exploratory tours. Most of those tours took place during 1985 and involved long bus trips to other major cities in the United States where tenant management is being implemented. Included among those sites visited were the tenant managed developments in St. Louis, Washington, D.C., Boston, Cleveland (Ohio), and Louisville. Each trip was a valuable learning activity for the residents, both in terms of knowledge acquired about tenant management and the experience gained from the trip itself.

Community organization was accomplished by dividing the housing development into two areas that were represented by coordinators. Those areas were further divided and each subdivision thereof was assigned to a row captain whose duty was to assist the coordinator in supporting the tenant management effort. Contracting other residents and communicating the purpose and value of the program became the single most important role of the area coordinators and row captains.

Training

Training for the participants at the LeClaire has been on-going since funds were first obtained in 1984. Classes in leadership, organizing, and self-improvement were held at the Darrow Center for all interested residents. Other training sessions were conducted in workshop style by certain well-known persons who were experienced as well as skilled in tenant management functions. But the residents believed the most effective learning that has happened so far has been the result of the exploratory trips that were made to other cities that have undergone the processes of resident control. Peterman (1984) saw the increased self-esteem accrued to the residents as a result of their self-help effort to be significant as a motivating force for further learning.

Community organizers, area coordinators, row captains and members of the board of directors have all undergone training for their particular roles in the program. Training was provided by a number of institutions which included: Truman College, Midwest Academy, and the National Training and Information Center. All of these were based in Chicago.

The Dearborn Effort

The second tenant management effort evolved from a workshop that was held as a weekend retreat at the Loredo Taft Campus of Northern Illinois University. Seventeen Public housing residents were joined by five staff members, including the executive director, from the Chicago Housing Authority (CHA) and four consultants representing two cities where tenant management had been successful. The purpose of the workshop was to learn, first hand, about the tenant management experience in St. Louis and Jersey City and to consider implications of that experience for developing tenant management within the CHA (Heaney and Horton, 1985).

Although residents from Dearborn Homes were not included in the workshop, they did begin participating in follow-up meetings that were held bi-weekly on Saturdays for five hours. This participation grew into a serious commitment to the goal of achieving control over their housing units. Subsequently, the Lindeman Center (who organized the weekend workshop) was invited by the Dearborn residents to assist them in preparing for a tenant management program at that development. Lindeman aided the residents in critically thinking out how they could begin effectively developing strategies that would be applicable to their situation. The residents were led to develop the following questions: (1) What does tenant management look like elsewhere? (2) What are its successes, difficulties, and obstacles? (3) Which model of tenant management is most appropriate (or most workable) for Dearborn Homes and similar high-rise developments? (4) What alternate negotiating action/strategies might be needed to achieve a tenant/CHA contract?

To further aid the residents in achieving the desired end, Lindeman proposed a five-step process, mentioned earlier in this paper, that was highly participatory in nature. That process gave rise to the community organization plan and participation eligibility requirements agreed on by residents present at the original meeting. It was decided that only those buildings whose residents had planned and carried out a project which depended upon broad participation by the residents would be eligible to participate in the tenant management preparation program. This plan ensured optimum if not maximum cooperation by residents of a particular building.

After four weeks, four buildings in the development qualified to take part in the tenant management effort. A steering committee was selected and training began two weeks later. Workshop training sessions were conducted by Truman College. In addition, several speaker-trainers were brought in who dealt with specific subjects that were germaine to the tenants' effort and to community development in general.

DESCRIPTION OF THE DATA

To analyze the data produced in this study a contrast was made between the participatory research model and the technical assistance model. Those models were found to differ in respect to the assumptions made by the technical advisors and others who were in the position of facilitating and/or encouraging the residents. The LeClaire group was taken to be an example of a technical assistance model because its advisors carried out research, obtained funding, and scheduled training for the residents (Biddle and Biddle, 1965).

Dearborn, however, existed as the model that was developed through the participatory research approach. That approach allows powerless groups to discover their problems, make decisions about how to solve them, and take the necessary steps toward reaching solutions to their problems with minimum help from persons who are outside the group. Participatory research assumes that all knowledge is socially produced and that which is accepted as official knowledge is that knowledge which supports the dominant culture.

A descriptive analyses of Dearborn and LeClaire was made by comparing the characteristics that have shaped the tenant management effort at those developments. Those characteristics that were viewed by the author as indicators of why one development was farther along in its endeavor were: (1) geography; (2) race; (3) types of dwelling units; (4) the kind of support network; (5) advocacy institution support; (6) on-site agency support; (7) committed tenant leaders; (8) percentage of two-parent families; (9) family income; and (10) an on-going training program.

The two models were seen as part of a continuum in which traditional adult learning was at one end and participatory research was at the other. The technical assistance model was to be found somewhere between the other two models.

Strengths and weaknesses of the models

To further examine the effectiveness of the two models, their strengths and weaknesses were identified vis-a-vis the residents' efforts toward their goals. Participatory research was found to be strong in the areas of building decision-making skills, developing group independence, learning to think critically, and participating in the utilization of their own indigenous knowledge to produce a more permanent power. Three weaknesses of the participatory research model were found. One was the limitation placed on participation by outsiders. Another was the lower level of funding that traditional models receive. The third weaknesses lay in the danger that participatory research could be used to actually manipulate and dominate instead of empowering.

The technical assistance model was seen as strong in the area of external help especially from consultants and the larger community. In addition, access to varied funding sources represented another strength of this model.

The major weakness found in the technical assistance model was that it did not foster a feeling of independence in the residents simply because too much was done for them. During the LeClaire effort, a great many residents were not part of the planning or decision-making. Therefore, it is doubtful that they gained new knowledge or understanding about their situation that would place them in a position to chart the course of their own lives.

The Viability of Participatory Research

The viability of the participatory research model as an adult education strategy for low-income urban adults was bolstered by the aforementioned strengths of that model. Moreover, the fact that many bold measures on the part of frustrated tenants to change conditions of their living places through other than conventional means indicates a need for a strategy that is consistent with their social system. In short, low-income people know their own needs, values, desires and problems. However, very often, what they don't know is how to attack their problems in a way that will be most beneficial to them. Initiating action in this direction is where participatory research comes in. Someone, whether a group member or an outsider acting as facilitator, must bring the group together and attempt to critically assess the situation. When people get fed up with conditions and refuse to tolerate them any longer, they reach a state of tension that provokes action.

In addition to getting action started, one must allow the group members to take part in selecting the strategies and resources that they will use in carrying out their action. In this way, whatever action is initiated will stand the best chance of being sustained so long as problem solving remains in the hands of the tenants.

CONCLUSIONS

This study sought to determine the effectiveness of the two models as adult education strategies. Which strategy is more effective? Both produce results. Evidence does not support the idea that one model will work best all the time and with all groups. However, in order for a strategy to be viable for educating low-income urban adults, it should result in change. Change should occur not only in the target group, but within the agency or institution that attempts to provide service to that group.

At a conceptional level, the results of this study are inconclusive. The participatory research model is based on a sociology of knowledge analysis of the problem. In this analysis, it becomes crucial that the power to pose problems, develop the dialogue, and to create and evaluate the solutions are the bases of power to confront dominant "ways of knowing". The Dearborn group's program was developed around those assumptions. The technical assistance model is based on the assumption that poor people do not have the capacity to critically define and analyze their problems. Technical help must, therefore, come from the dominant culture which forms a partnership with the subordinate group. Thus, the outcome for participatory research is not only changed structures, but changed participants with emphasis on the latter, which is labeled empowerment. The outcome in the technical assistance model emphasizes the former since its basic concern is power, not power through knowledge creation.

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A CAREER DEVELOPMENT PROGRAM FOR ADULT EDUCATORS: A CASE STUDY

Catherine P. Zeph, Kellogg Fellow, University of Georgia

Abstract: This study examines the impact upon the personal and professional lives of participants, all of whom are adult educators, in an adult career development program. This paper describes the current study and preliminary findings based on a pilot study. Results of the study will be reported at the Conference.

STATEMENT OF THE PROBLEM

Just how many career development programs are in existence is unknown (Brooks, 1984), and of those programs that do exist, little evaluation has been done or reported (Super and Hall, 1978; Brooks, 1984; and Bhaerman and Campbell, 1986). Hall and Lerner (1980) discuss the need for researching career interventions, especially those that "facilitate individual development" (p. 432). They pin the blame for this lack of research on both practitioners and academics: "the former group does not bother doing research on its organizational interventions, whereas the latter has shown little interest in translating its research into practical program recommendations" (p. 432).

The few studies that have been done on adult career development programs confirm two things. First, that there is a need for evaluating career development programs (Drake, 1983; Chapin, 1984). Chapin cites the need for organizations to evaluate their career development programs in order to justify both the continuance of current and the development of future programs. Drake found that very few organizational career development programs are formally evaluated. These two studies, combined with the lack of literature on the subject, point to the need for evaluating career development programs.

Secondly, that the study of individual development within career development programs is a potent area for research (Brownlee, 1983; Vander Wyde, 1984; McGuire, 1985; Cox, 1986). When examining individual development concerns within these programs, researchers noted some of the following: an increased self-responsibility for own career, an increased critical self-awareness, and an increased satisfaction in working towards career goals. It was also found that both the individual and the organization benefit from career development programs. Clearly, these few studies reinforce the importance of attending to the individual development needs of participants within career development programs.

Purpose

The purpose of this study is to examine the impact of one career development program upon the personal and professional lives of the participants. The Kellogg Career Enhancement Award Program at the University of Georgia is for "people who are involved in educating or providing services to adults in an informal, non-degree granting situation." The purpose of this award is to allow recipients to pursue activities that will enhance both their personal and professional lives. It thus is designed to address both career and individual developmental needs. Sponsored by the University of Georgia Cooperative Extension Service and the Fort Valley State College Cooperative Extension Program with funds provided by the W. K. Kellogg Foundation, this program was developed as part of the National Center for Leadership Development in Adult and Continuing Education and Lifelong Learning, and is modeled after the National Kellogg Fellowship Program.

The Kellogg Career Enhancement Award Program has been in operation since 1986 and will run through the end of 1989. A different group (known as "class") of participants has been or will be selected for each calendar year - 1986, 1987, 1988, and 1989. Applicants must be residents of Georgia and may apply for up to $5000 for one year. Participants must attend an orientation seminar and two three-day seminars and they receive up to 21 days paid leave to conduct their chosen activities.

METHODOLOGY

This study is a qualitative case study. Data were gathered in three ways: (1) from document materials, (2) from participant observation at planned seminars, and (3) from in-depth interviews with participants. To that end, exploratory questions guided the research. These questions focused on the individual participants, and included such concerns as:

(1) How does the Program impact the participants' professional and personal lives?
(2) How do the distinct components of the Program (e.g. application process, group seminars) create similar and dissimilar impacts upon participants?
(3) What personal factors (e.g., occupation, age, type of activities selected) might create differences in impacts among participants?
(4) What other impacts might the Program have on participants home, work, and community environments?

Pilot Study of 1986 Class

What follows is a description of the methodology used to research the 1986 class. This same process was used to study the 1987 class, and will be used again for the 1988 class.

Participant-Observation: The researcher attended group seminars and interacted with the participants as a participant-observer. Considered one of the "group," the researcher participated in all activities and freely conversed and mingled with the participants. Observations were made throughout each seminar. During quiet times, at the conclusion of each group session, and at the end of each day, notes were jotted down. These notes included observations about the group's interactions and dynamics, comments by participants, the seminar's program, and overall reflections. During the interviews, which occurred at the conclusion of the year, participants were able to relay to the researcher their personal feelings and experiences of these seminars. Because the researcher had attended the seminars and been accepted by the group, a level of trust (with confidentiality ensured) was present that enabled each participant to speak freely and expressively. The results were a collection of honest and revealing conversations.

Interviews: Each interview was taped, and then transcribed verbatim as soon after the interview as possible. Notes about the interview and interviewee were jotted down immediately after each interview, and again during each transcription. Throughout the interview and transcription process, responses that appeared either especially significant or that were similar to other responses were highlighted. The analysis continued after the completion of the transcription process. Known as the constant comparative method of analysis (Glaser and Strauss, 1967), each succeeding interview and transcription was analyzed against the previous one(s). Certain types of responses emerged repeatedly from the data. These responses were then categorized according to the component of the program to which they corresponded (see attached chart).

Document Materials: The researcher had access to written materials related to the Program. The Program proposal, minutes of meetings, and Kellogg Foundation literature were all perused. Additionally, individual files of each participant were read through carefully, both before meeting the participants and again after coming to know them personally. These files included the participants' original applications, modified activity proposals, correspondence with the Program staff, and information regarding their specific activities (e.g., brochures, travel itineraries, and expenses). The reading of these materials helped the researcher to gain a broader perspective of the Program and the individual participants.

DESCRIPTION OF DATA

The 1986 class had 21 participants - 9 men, 12 female; 19 white, 2 black - with three participants joining together on one activity. The 1987 class had 12 participants - 8 women, 4 men; all of whom were white. The 1988 class has 15 participants - 12 women, 3 men; 12 whites, 3 blacks. They are from all parts of Georgia - urban and rural, mountain and coastal areas. Their occupations include (among others): many Cooperative Extension County agents, three historic preservationists, two public school administrators, two ministers, two nurse administrators, two therapists, a community arts administrator, a nutritionist, and a museum director. All are community-based adult educators, serving their organization and the public.

With their $5000, participants travelled (to name a few places) to: New Zealand, Europe, Canada, Alaska, the American Far West, Boston, Washington, D. C., Florida, Coastal Georgia, and Atlanta. Their activities included learning about sheep-raising, family therapy, art, small fruit production, vegetable production, older adults (80+ years old), salt marshes, living museums, story telling, management techniques, continuous care facilities, bed and breakfasts, politics, computers, and forestry. All were encouraged to "think big" in writing out their goals, especially at the orientation seminar, where they had opportunities to modify their original proposals. They were also told, particularly if their activities were oriented toward the benefit of the community, to include activities of personal interest. The integration of professional and personal interests, combined with the nudge to be creative, made for diverse and interesting activities. The interactions between participants allowed for networking and new ideas to take place.

Preliminary Findings

The attached chart lists the preliminary findings of the study conducted on the 1986 class. Similar findings are emerging from the 1987 class data, which will be reported at the Conference. This Program, through its group seminars and individual activities, allowed participants to "think big," to realize that they "put themselves in boxes," and that they can do anything they want to. Other categorized responses that came out of the 1986 data analysis include: a "ripple effect," where participation in this program affected family members, colleagues, work environments, and sometimes communities; the often serendipitous connections and networking between participants; the testing out of dreams and discovering new directions; some guilt of receiving award and money; and doing "global" activities that dealt with "local" issues.

The pilot study of the 1986 class and the preliminary research conducted on the 1987 class confirmed the researcher's initial suspicions that the impact of the award, due primarily to the structure of the Program, has been great. The impact of this Program has made a tremendous difference in the lives of these people and the effect of the award will be with them for many years. As a direct result of this Program, at least two participants created new jobs for themselves. Others are contemplating career or job changes that they would not have if it were not for their participation in this Program.

CONCLUSIONS

The study of this Program is significant for both the career development and adult education fields. Adult career development programs can be an excellent tool in which to assist adults in their individual and career development, and can provide forums for research for both the career development and adult education fields. This study has shown how one adult career development program can enrich deeply the personal and professional lives of its participants.

KELLOGG CAREER ENHANCEMENT AWARD PROGRAM

Preliminary Findings Based on Interviews with the 21 Participants of the 1986 Class

COMPONENT OF PROGRAM	CATEGORIZED RESPONSES
A. Application	
1. Form	Knew immediately what would use award for; this Program became vehicle in which to pursue dreams.
2. Interview	Interactions between semifinalists allowed for networking, ideas, and excitements to be shared.
B. Selected as Participant	Boosted self confidences: somebody believed in them and their ideas.
C. Group Seminars	
1. What do we have in common?	To know that one's ideas were as important as others created respect and bonding between participants.
2. Thinking Big	Discovery of what others were doing forced participants to examine their own choices of how to spend $5000. Realized they had fenced themselves in.
D. Carrying Out Activities	
1. Kellogg Name	Entree to places and people that otherwise would not have.
2. Time Frame	"Put up or Shut up": One year limit forced prioritization and implementation of activities.
3. Forced Discovery	Learned in space of one year what would have taken 20 years. Resources + time gave room to test dreams and interests, experience new changes.
4. Process	Structure of program was model for their own activities and experiences: "What are your goals?"
E. Overall Significance of Program	Allowed them to fulfill dreams, explore interests, be changed at possibility of what could be.

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A Conceptual Framework for a Study of Community and Competence among Low-Literate Adults

Linda Ziegahn
Kellogg Post-Doctoral Fellow, Montana State University

Abstract

The purpose of this paper is to propose a framework for qualitative research focusing on low-literate adults' perceptions of functional competence within a social and cultural context.

Background

Educational researchers have paid more attention to the social contexts of literacy in recent years. As charges that literacy teaching must extend beyond the identification of prespecified skills and outcomes increase, researchers are delving further into the socio-cultural environment in which reading and writing take place. Studies by Arlene Fingeret and Shirley Brice Heath in particular have illuminated the relationship between reading and writing and a web of social, language, and cultural influences on an individual's choice of communication channels, including literacy. Adult educators who take seriously the concepts of learner self-direction and the role of experience in adult learning can learn from such empirical studies of individuals' literacy practices, values and decisions.

Adult literacy becomes an "issue" when dominant social and political forces create a climate in which a particular educational level is widely equated with intelligence and the ability to contribute to society. A "low" level of literacy is thus a normative measure, representing primarily the lack of certain educational certificates valued by society in general and by the highly literate in particular.

Needed is a conceptual framework which describes how researchers might study low-literate adults' perceptions of their own competence in society and how literacy fits in with this competence, the social networks which provide them with support for literacy, and perceptions of the role and effectiveness of institutions charged with delivery of literacy skills to those labelled as "needy". Figure 1 illustrates such a framework, situating the literacy decisions, practices, experiences and perceptions of adults with limited reading and writing skills within a context of community and adult competence.

Community as Context

Community context represents the antithesis of the standardized approach to literacy because it gives credence to the particular nature of a given locality and culture. Literacy approaches which attempt relevance for a broad spectrum of learners risk satisfying no one. Key to studies by both Fingeret and Heath is the belief that the process of learning to read and write cannot be decontextualized, focused on isolated, measurable subskills taken out of a communication whole. Literacy decisions, values and practices occur in communities, and an understanding of relevant conceptual frameworks comes from community participants rather than a predetermined set of categories.

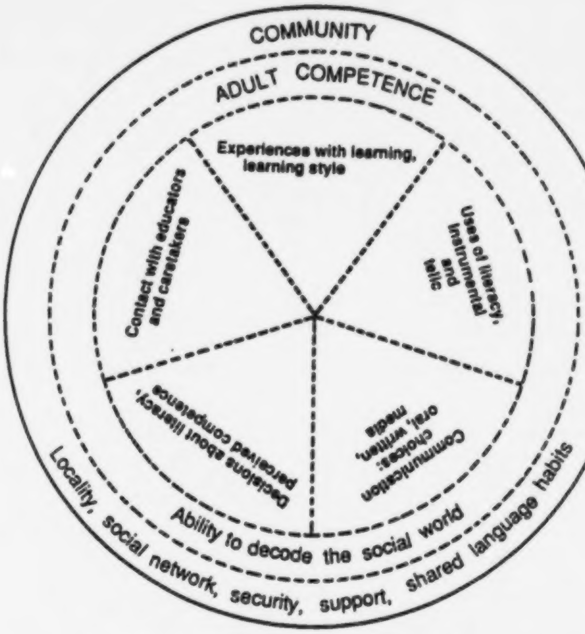
COMMUNITY
ADULT COMPETENCE
Experiences with learning, learning style
Uses of literacy: instrumental and telic
Communication choices: oral, written, media
Decisions about literacy, perceived competence
Contact with educators and caretakers
Ability to decode the social world
Locality, social network, security, support, shared language habits

Fig. 1 Model of Factors Influencing the Actions, Values and Decisions of Low-Literate Adults

Fingeret (1982a) describes community as the coexistence of geographic neighborhoods and social networks; a web of social relations, security and support in which primary, consistent face-to-face interaction takes place. The social networks in her study of illiterate adults in a northeastern American city were influenced by occupation, security, and ethnic background. Individuals needing assistance in reading or writing called upon particular members of their network depending upon the public or private nature of the communication. Maintenance of this social network was critical in an illiterate's decision to improve reading and writing skills and risk disruption of the reciprocal nature of the network in so doing.

Heath (1982) believed communities to be appropriate for studying education because they include and interact with educational institutions and are the locus of enculturation forces such as families, churches, and voluntary organizations existing apart from schools. She chose black and white working class communities in the Piedmont area of North and South Carolina as a context for the study of language practices.

Competent Adults

While an individual's actions around literacy are heavily influenced by other members of a social network, they are also based upon a person's ability to "decode" his or her social environment. Literate adults can decode print; illiterate adults who are "functionally competent" (Fingeret 1982a) become so by learning to decode the social world. Fingeret's interviews and observations led her to an understanding of how illiterate adults defined competence:

1. Parenting - the preparation of independent, competent adults while maintaining continuity of cultural trends.
2. Social control agencies - the ability to procure resources and respond to requirements from such agencies, when necessary, while maintaining personal autonomy and reciprocal relations within inner social networks.
3. Deviant behaviors - the ability to control such behaviors well enough to maintain social networks, personal autonomy.
4. Economic responsibility - meeting immediate needs as well as planning for the future, regulating consumption, maintaining a source of income which does not conflict with social networks or social control.
5. Learning - the ability to identify learning needs and appropriate resources to meet learning objectives within the desired boundaries of socio-metric maintenance and change.
6. Physical mobility - using available means of transport to negotiate the physical environment.
7. Increasing potency - using literacy as a means of developing new perspectives and increasing potency as well as towards instrumental ends. (p. 110).

Thus, both community and individual forces stimulate low-literate adults' decisions about literacy as a means of maintaining or furthering competence within desired social networks.

Uses of Literacy

Use of reading and writing skills is important to an understanding of the place of literacy in the lives of adults who have had little schooling and whose reading, writing, or speaking skills are considered nonstandard by literate powerholders. Heath's (1986) typology of uses of literacy arose from her study of "middle" literacy communities, where 1) the form of language used in reading, writing, and speaking was considered nonstandard, 2) members' primary identification was local, 3) literacy skills were not linked to work habits, and 4) livelihood was not dependent on modern technology. Types of uses include the following:

Reading Uses

Instrumental - to gain information for practical needs of daily life;

News-related - to gain information about third parties or distant events;

Confirmational - to check, confirm, or learn facts or beliefs;

Social/ Interactional - to gain information pertinent to social linkages and forthcoming activities;

Recreational/ Educational - for temporary entertainment or for planning a recreational event;

Writing Uses

Memory aids - to serve as a reminder for the writer;
Substitues for oral messages - used when direct communication not possible;

Financial - to record numerals and write out amounts and accompanying notes;

Public records (church only) - to announce order of church services, events and record financial and policy decisions.

These uses were particular to the black and white working class communities of the Carolinas which formed the study context. A similar study conducted in another location would probably alter these categories.

Heath's typology of uses might fit in to either one of Fingeret's (1982a) literacy goals. "Instrumental" change is concerned uniquely with skill development, while "telic" change envisions a different outcome for development of reading and writing skills: either a new social location, or new relationships to powerholders in the larger society. Important for this conceptual framework is the individual's actual uses of reading and writing skills, no matter how "rudimentary", and their fit with the individual's social and competence goals.

Fingeret's (1982a) study led to the identification of four factors which underlie an illiterate's decision to read:

1. Flexibility in the social network, the result of a change in personal circumstance;
2. Value placed on learning to read and write that reflects an analysis of the social environment and instrumental needs;
3. Desire to establish a new relationship to the environment;
4. Willingness to participate in programs that are often boring and alienating. (p. 327).

When a satisfactory social or cultural network is threatened, illiterates may choose existing networks, cultural meanings or social locations above learning to read and write.

Experience with Learning

Of great importance to illiterate's decisions about improving reading and writing skills is their prior experience with learning - both early language socialization processes and contact with school-based learning. Heath found that children who learned to communicate by watching and listening to their elders and trying out observed behaviors had difficulties in school situations where content was lifted out of its social, communicative context. Children whose home environment resembled that of the school, with parents who read to them and asked questions about items and events in texts, had fewer problems in the first few years of school. Difficulties increased in this second community when learning in school was not incorporated into non-school value or behavioral systems, due to the parents' limited literacy skills and ability to model such linkages for their children.

Children who do not succeed in figuring out the requirements of school-based learning often leave as soon as possible, using what reading and writing skills they possess only in relation to specific tasks. They rely more on social networks to bridge the gaps in their literacy abilities. Similarly, when reading and writing are viewed culturally as community activities in which text is meant to be shared and discussed, learning situations structured around isolated words and individual, private effort will not be as attractive to potential learners.

Communication Choices

Fingeret found that illiterate adults with a more "cosmopolitan" orientation were willing to use media such as tape recordings as a substitute for note-taking in conducting business. Yet it might be possible that for those adults who want to preserve certain face-to-face social interactions which have helped them transcend illiteracy, either learning to read and write or relying on media (tape records, videos) may represent a threat. On the other hand, modes of communication other than face-to-face may also be viewed as a means to increase independence.

Contact with Educators and Caretakers

Educators and "caretakers", Fingeret's term for those who work in the social control agencies which frequently come into contact with illiterates, have figured prominently in society's view of illiterates and in the latter's view of their own functional and literacy competence. The common view has been that once certain basic literacy skills were remediated, non-productive behavior would cease and new literates would take their place, psychologically and economically, in the ranks of the middle class (Bowles and Gintis, 1976).

The educators and caretakers are brokers between the norms of the dominant society and the world of the low-literate adult. For people wanting to gain entry into the mainstream of American values and behaviors, adult basic education teachers, as an example, may be the interpreters of the minimum standards of school-based programs. Whether an individual chooses to approach standard educational programs at all will be heavily influenced by such factors as social networks, past learning experiences, communication choices, and perceptions about the consequences of improving literacy skills. If and when contact with mainstream education is established, these factors will continue to play a role in the adult's subsequent evaluations and decisions about continued involvement in learning to read and write.

This framework points a direction for qualitative research on communities of low-literate adults which would explore individual practices and values, both within and outside of literacy programs. Adult educators value the individual, who brings to learning a history and culture which have little to do with standardized approaches. Researchers can contribute to the practice of adult education by focusing on literacy from the viewpoint of the learner.

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COMMUNITY ECONOMIC DEVELOPMENT and ADULT EDUCATION

Paul Zysman, Adult Education Research Centre, University of British Columbia

Abstract. Community economic development (CED), with its process of community participation, control and/or ownership, and its goal of local socio-economic development, heightens the community residents' motivation to further participate in CED's "learning and development" praxis. As such, CED is an educational intervention that can help low-income community residents break their poverty cycle.

A. Background, Purpose, Method

Community Economic Development (CED) is an alternative approach to revitalizing economically depressed communities and creating employment. Considering the seeming historical endurance of the problem of poverty (Berndt, 1977), and of North American governments' unwillingness and/or inability to seriously help resolve it (Perry, 1982), there is a strong need to study any approach that purports to do so. This paper's purpose is to do exactly that. CED can also be seen as a nontraditional economic and educational approach that could be used in any community.

CED's philosophy is holistic and humanistic and ranges from progressive to radical. Its underlying assumptions are that humanity is innately good, cooperative and has untapped potentials which, when tapped, are among a community's prime resources. CED can be perceived as a popular and community education intervention.

This writer defines CED as the *"participation, control and/or ownership* by community residents, in collaboration with "all sectors", in their community's economic development processes, institutions and enterprises that have the goal of their community's socio-economic wellbeing". "All sectors" include both public and private sectors, educational institutions and social agencies. This paper will examine CED's goals, processes, essential elements, historical roots, funding sources, government policies, research and theory. It will further examine the roles of learning, training and education, both as inherent qualities and activities of CED processes. What are these inherent qualities and activities? How do they interact with the developmental side of CED? What is CED praxis?

The issue of nonparticipation in learning programs by low-income people is a major problem as cited in adult education literature. This nonparticipation is seen as the result of many factors, including low socio-economic status, and as a cause for the further perpetuating of social inequality and poverty. This study will investigate how CED, both as an educational and developmental intervention, can motivate poor and working-class people to participate in learning and education activities and break the poverty cycle. While there is no theory of participation per se, parts of the psychosocial interaction models of participation, as developed in the adult education literature, will be used.

B. Community Economic Development

CED Goals and Processes. The primary goal of CED is a community's integrated social and economic development and wellbeing. Subsidiary goals vary, depending on felt needs, the contextual situation of time and place and on their interpretation (Clarke, 1981).

The CED process is integrative and involves the community's collective conscious initiative --- its participation, self-help, ownership and decision-making --- in CED activities (Jackson, 1984). These activities include the creation and management of economic source organizations, such as community development corporations (CDCs) and small business incubators, that are like machine tools producing more tools --- e. g. businesses, services and industries (Perry, 1973). Other activities involve such CED tasks as educational outreach and management of ongoing projects.

Essential Elements of CED. The following are the necessary ingredients for the CED process to achieve its goals. A pressing social need, community solidarity and popular support are the preconditions for CED to take place (Clarke, 1981). The three essential ingredients of CED are local capacity, resources and technical assistance, which includes education and training (Jackson, 1984). These ingredients are interactive. Local capacity refers to the community having the leadership, patience, commitment and skills of the entrepreneur, animator, manager and technician. Technical assistance, including counselling, training and collaboration is provided by "all sectors". Such linkages and partnerships allow for a horizontal, integrated and interactive development and education approach within neighbourhoods. With strong local capacity, a community can more easily obtain money, materials, physical space and technical assistance.

The History of CED. The history of CED varies according to the different regional realities. A common thread is the three-stage cycle of ideal utopia, expansionary movement and institutionalization, engaged in, in turn, by CED visionaries, participants of movements and managers (Melnyk, 1985). American CED organizations and processes have some of their historical roots in the centuries' long struggle by Blacks for civil rights, the political philosophies of Dubois, Garvey and Washington, and the eventual urban riots of the 1960s. The riots showed the bankruptcy of older, large city institutions and gave the impetus to bring community development corporations (CDCs) into being (Perry, 1973). There was a perspective shift from the individualism of Black civil rights and entrepreneurism to the socio-economic concept of a community's collective approach (ibid). The idea of CDCs spread quickly to other minorities, to rural communities and to low income groups.

The CDC's track record has been mixed. While there is little conclusive overall research as to its success in effecting economic development, there are studies that indicate greater success than the private sector in terms of percentage of business enterprises that survive. At the same time, there has been nearly universal agreement as to its importance (Surpin, 1985).

Canada's CED historical roots are varied. These include the community development approach and the cooperative and adult education movements. As a movement, adult education manifests itself sporadically in different locales at different times. Usually adult education is used as a tool to support and propagate a movement. One clear example of where an adult education movement resulted in CED is the Antigonish movement of the 1930s. Through a campaign of mass meetings, people were confronted with their economic situation and challenged to "become masters of their own destiny". What grew out of this were economic improvement study clubs and kitchen meetings, through which hundreds of small cooperatives, both consumer and producer, were created. By the 1950s, the CED network had become rigid and unresponsive to the community's new needs, because the educational element of critical discussions on the ideology, philosophy and values of cooperatives was gone (McLeod, 1986).

Funding CED Activities and Government Policy. There are five sources of funding. These are public and private sector funding, community oriented financial institutions (such as credit unions), communities raising their own capital and informal economies. Whether a community invests in itself, depends on clear identification of community needs, usually through some form of educational outreach and on success in organizing the locality. Government policies tend to support free enterprise alone. Policies that require the funding or subsidising of CED activities are seen by government as being politically unacceptable (Clarke, 1981). Norway is an exception and example of a government that formulates and expresses CED goals through public policy. These social and economic goals, centred on salmon farming, are preserving and strengthening coastal communities, through economic renewal.

CED: Theory and Research. Though a theory of CED hasn't been articulated there has been some theoretical focus on the revitalization of community through community ownership, control of, and participation in, local economic development. Likewise, while there are still many major CED research questions that need to be explored, there have been pockets of research of the CED territory. Some of this research and theory will be touched upon below.

Community control, a major element of CED, refers to residents of a community participating in decision-making as workers in community-based enterprises, as members of CED organizations, as its board members and so on. An ongoing problem for CED practitioners and thinkers is whether the control of CED organizations should be in the hands of professionals and interest groups, or in the hands of the poor and working classes. Control by professionals is favoured by some, because it would more likely bring short-term success and satisfy the funding criterias of outside sources. Others believe that the low-income community's "learning and developing" is possible only if workers and the poor are in control. Still others feel that these two positions can be combined.

While recognizing that more research is needed, studies generally support the hypothesized positive effects of employee ownership of enterprises and cooperatives on organizational identification, employee job attitudes and organizational performance (Long, 1978a, 1980). Organizational identification is composed of organizational integration, involvement and committment. Integration takes place when individuals perceive shared interests and goals with others. Its effects are enhanced job effort, motivation and cooperative behaviour. Feelings of solidarity, membership and belonging, come with involvement, out of which commitment results. Their effects are greater general satisfaction, cooperation and behaviours supporting the organization, such as willingness to innovate, and lessened turnover, absenteeism and grievances. Value of company shares tend to go up, as do profits (Long, 1978a, 1980).

Although employee ownership and control have had favourable effects, are these effects primarily due to ownership or to sharing in the decisions? Long's (1978b) research indicates that although employee share-ownership has beneficial effects on job attitudes, such as commitment, employee participation in decision making appears to have stronger effects on job attitudes and organizational identification. Of course employee-ownership may create conditions that facilitate participation. The limitations with Long's research is that they are case-studies and are not longitudinal.

Participation, as the motivated involvement in activities, is central to the theory and practice of both adult education and CED, whether it is to learn, work, organize and so on. The essence of the equity problem for low-income individuals and communities is that they do not participate, whether it is for attitudinal, structural, cultural or other reasons. The possible benefits of participation in CED are many. Besides the experiential learning and the possibility of paid work, there is the raising of self-esteem and changing of attitudes toward learning, education and work. The CED activities become responsive to the local residents' felt needs. Participation mobilizes labour and resources otherwise not, or poorly, used. It provides creative and corrective feedback regarding programs, policies and new programs and it affirms democracy (Jackson, 1984; Cahn & Cahn, 1971).

The critiques of CED are varied. Berndt (1977) feels that the concept of self-help has historically made the poor responsible for their condition without giving them meaningful resources or power, let alone alleviating their exploitation and oppression. Even if local control and participation is attained, critical theory attributes almost no importance to these as possible agents of social change. Molotch (1979) sees urban neighbourhoods as social constructs that are shaped "...according to the needs to accumulate capital". He and other radical social scientists doubt that CDCs can change the structures controlling the working class.

CED Educational Qualities and Activities. The most crucial step of the CED process, animation (Clarke, 1981), with its educational intervention, is a "triggering event" and important "learning moment" for the community. The animator, as educator and organizor, facilitates an educational outreach (such as the Antigonish mass public meetings), and the subsequent unfolding of the implicit meaning, process and aim of CED, which is community control, participation and ownership of the community's economic life. This broad participation by CED institution organizors, board members and workers, nurtures the improvement of educational and skill levels, thus maximizing local human resources, local capacity and the shedding of feelings of inadequacy and dependency (Jackson, 1984). Motivation increases, leading to greater local control and higher productivity, which in turn leads to more learning and education, greater local pride and confidence, with visible and real contributions to local wellbeing (Wisemer & Pell, 1981). This interactive dynamic between learning/education and development can be perceived as praxis. Brookfield (1985, p. 48) refers to praxis as "activity, reflection on activity, collaborative analysis of activity, new activity, further reflection and collaborative analysis and so on". Participation in the learning, educational and developmental activities of CED can mutually reinforce each other and increase the likelihood of further participation in CED processes.

The total community becomes the classroom laboratory for learning (Knowles, 1980). CED, as an extension of community development, uses educational activities as a means to deal effectively with their economic and life problems. At the same time, CED is a vehicle for individuals and communities to learn how to better solve their problems. Once having tasted the efficacy of learning activities in helping to adapt to, and effect changes in, their lives, it is very likely that people will continue to participate in learning activities and in praxis, both in the CED domain and in other areas.

Roles that education plays in the CED process are varied. These include explaining the global economic context to communities, conscientizing communities as to their economic realities, and helping communities organize themselves, so that viable community-based economic organizations and enterprises can be set up. The residents' understanding of CED philosophy of community self-help, control, participation and collaboration between all sectors, is deepend by their ongoing learning and doing of CED activities. Likewise, identifying community economic enterprises, putting them in place, operationalizing, managing and working in them requires experiential learning and skill training.

The nonformal education formats are varied and may include inservice training by entrepreneurs or innovative programs such as those provided by small business incubators and CED centres. In collaboration with other community sectors, these incubators and centres counsel, train and educate community groups and residents in all aspects and types of business.

Formal education institutions, such as university extension departments and community colleges, have historically played some type of economic role in the community, participating in community development, rural development and so on. In B.C., some are active in comprehensive CED work, while others provide information about the range of approaches and options, or they may incubate small businesses by making their facilities, equipment and expert resources available to the local communities (Advisory Committee, 1985). These formal education institutions, as participants in local economic development, can provide the link between learning and its practical application in the community. In the process, individuals acquire new skills, new enterprises are developed, new employment opportunities are created and the local economy is strengthened (ibid).

An example of a comprehensive CED formal education system is the one run by Spain's Mondragon cooperatives. Backed by a research and development unit, its technical school trains its worker-owners in the required theoretical and practical skills and educates them in the cooperative philosophy. An innovative factory school, Actividad Laboral Escolar Cooperativa, is a real working enterprise run by students, and has been an independent cooperative making a profit. A cooperative hostel takes groups of people from different areas of the Basque and educates them in the principles of worker-owned cooperatives. Mondragon has also organized primary schools for the community and is in the process of setting up a recurrent education system for its worker-owners (Thomas and Logan, 1982).

C. The Significance of the Adult Education-CED Relationship

An important element for both CED and adult education is the concept and practice of self-directedness/self-help. Because of this element, as an educational format, CED is very congruent with adult education. Other congruencies are that both CED and adult education are coterminus with life and experience; that they both have goals and processes of self-actualization and self-empowerment; and that they both are dependent on people's participation.

Adult education writers have presented different models that purport to explain people's motivation (or lack thereof), to participate in learning activities and education. These use cognitive theory approaches and forcefield analysis (positive, negative and neutral forces) of people's attitudes, situations, needs, environments and their interactions.

The significance of CED praxis is that it is a holistic treatment of daily life, that it is an integrated mix of economic and educational activities and interventions that low-income individuals, groups and communities can, and do, find meaningful, attractive and important to participate in. The assumption here is that participation will fuel CED's learning-development dynamic. CED processes can heighten people's positive motivational forces and reduce the negative ones, in areas such as attitudes and environment. Those processes described below are in the areas of information, study possibilities, expectations and goals, member groups, reducing the degree of hierarchic structure and raising of community and individual sense of ability.

The first CED step, animation, as an educational outreach provides information to the community as to the possible aims and processes of their community's economic development. A dialogue pertaining to the community's felt needs, realities, resources ensues. The residents, (with the animator's assistance), develop their own learning and development agenda. Ideally, this agenda should be practical and relevant to their situation. It should be something that they expect to accomplish successfully and that will meet their goals. The residents (with assistance) organize themselves into appropriate learning formats --- e.g. research committees and business cooperatives. These learning situations are relatively nonthreatening, as people learn from each other and through their own efforts. As CED praxis evolves into economic organizations and enterprises, the teaching and learning techniques remain experiential, practical and chosen by the low-income participants. Educators and instructors are perceived as peers.

CED activities create and strengthen member and reference groups. The former are groups of people acknowleged as members, while the latter are groups of people that utilize the norms of member groups (Rubenson, 1983). As these member groups successfully evolve into CED organizations and enterprises, and become more familiar and at ease with the learning and educational activities, their attitudes towards learning, training and education improve. This can have a strong "recruiting for learning" influence on the rest of the community. Miller (1967) points out that to encourage higher rates of participation in adult education by low-income people, a market psychology of enrollment must be dropped, and strategies developed for working with people in neighbourhood, community or urban renewal organizations. If necessary, the organizations may first have to be created.

The CED process reduces the degree of hierarchic structure both in the workplace and in community life. This occurs in the workplace through employees' participation in ownership of, and decision-making in, community-based business enterprises. This is the result of, and creates further opportunities for, participation in different forms of learning, training and education. For example, through cooperation, teams of workers do tasks that managers had previously done. Or extensive rotation of work roles among members maintains worker interest, and allows for the training of each other to be a natural and continuing part of the work process.

The two factors, of (1) the reduction of the degree of hierarchic structure within the community and (2) the residents' involvement in, and control of, CED activities, tend to mutually interact and reinforce each other. These CED activities can include the rotation of organizational positions and cooperative working and learning together. Community identity, belonging and ties are strengthened, which in turn raises communal and individual confidence and pride. The cooperative stance of the above CED approaches, results in stronger motivation to participate.

Conclusion. CED appears to be a method of learning, with study contents and educational goals that low-income people are motivated to participate in. The significance of the interactive relationship of the educational and developmental qualities and activities of CED is that the educational part heightens the motivation of a community's citizenry to participate in local economic, social, cultural and educational development, and vice versa. While worker and resident control and ownership of, and participation in, CED enterprises and praxis, with accompanying socio-economic development has grown over the past decade, what needs to be further investigated is the extent of their control, ownership, participation, praxis and socio-economic development. To what degree is CED helping to break the poverty cycle and change the social stuctures more equitably? Such a study would also facilitate practitioners, funders and policy-makers, in evaluating CED programs and deciding where, and how much, to implement further CED activities.

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CREATING A FUTURE AGENDA FOR ADULT LEARNING RESEARCH

Ralph G. Brockett, Montana State University, Chair
Thomas Valentine, Syracuse University
Burton R. Sisco, University of Wyoming
Chere C. Coggins, University of Wisconsin-Madison
Robert A. Fellenz, Montana State University

Introduction

Over the past three decades, there has been considerable growth in the research-based literature on adult learning and the adult learner. However, a concern that is often leveled at adult learning research is that such efforts are characterized by a disjointed nature. Brockett and Darkenwald (1987) have recently argued against this "shotgun" approach to the development of research and have suggested that a key to building future research in adult learning will be found in "sustained efforts" to actively build long-term agendas in key areas (p. 30).

The purpose of this symposium is to provide a forum for exploring several areas that hold promise for future research activity. As Brockett and Darkenwald (1987) point out, when seeking to create a future research agenda, "it is logical to begin building on some of the areas that have been or are emerging currently as important research themes" (p. 30). The topics addressed in this symposium offer a glimpse at four such themes.

Research on Participation, Motivation, and Deterrents -- Valentine

For decades, adult education researchers have worked and reworked the basic question, "Who participates in adult education, and why or why not?" If the sheer number of studies done and the frequency with which such studies are cited are indicative of research significance, then participation is certainly our most significant topic. Furthermore, the desire to understand the forces that impel and hinder learner participation cuts across the many ideological orientations that comprise, and at times, divide, the field of adult education.

From a pragmatic perspective, there is the recognition that a field of educational practice cannot exist without learners. A research tradition that seeks to explain the antecedents and correlates of participation is seen by many as a "bread-and-butter" pursuit, one that can help to ensure the survival of an adult education enterprise. From a stance of learner advocacy, a better understanding of motivations and deterrents can lead to more responsive adult education in which the expressed needs of learners can guide program development efforts. Finally, from a social change perspective, the same basic information, when combined with an understanding of broader social forces, can lead us to identify and address comparative group needs by focusing programming efforts on those who are underserved or oppressed by the status quo.

Although a considerable amount of participation research has been done, we are far from having all the answers. Not being in a position to say what research will be done in the coming years, I will instead point to four things that I believe should be done, given the limitations of past scholarship.

First and foremost, we need to move towards a more unified theory of participation. I believe that the seeming fragmentation of participation research is largely illusory and that most researchers are working within a common, but largely tacit, theoretical framework. The work that has been done on such topics as motivational orientations, expectancy-valence, deterrents, and margin do not represent competing theories, but rather treatments of different aspects of a single, broad phenomenon. In the interests of parsimony and "do-able" research -- and to avoid the ever-present problem of multicollinearity among independent variables -- most researchers have simply sliced off manageable pieces of a complex phenomenon. The time has come for these pieces to be fitted together into an openly articulated theoretical framework in which the more molecular theories may reside.

Second, as writers and consumers of research, we need to attend more carefully to the contexts in which participation research is conducted, given the uncertain generalizability of research findings across adult education practice settings. A case in point is mandatory adult education, a common reality in some of the major growth sectors of our field. One might justifiably argue that participation research based on voluntary learning has little to say to those working with learners who are compelled to participate. Wanton generalization might lead us, for example, to force the Houle typology onto such a setting, as a powerful "master variable" embodying notions of external control and triggering major subroutines in a dynamic and flexible theoretical framework. The obvious need is for research programs that extend existing approaches to study samples drawn from diverse service populations.

Third, and somewhat more technical than the other three points, there is a dire need for an investigation into the influence of social desirability on self-report survey data. Survey research on deterrents to participation asks respondents why they didn't participate and then proceeds to give them a listing of alibis, in the form of Likert-type survey items; the item means in such studies are typically low. Conversely, surveys of motivation ask respondents why they did participate and then proceed to give them a list of attractive reasons; the item means in these studies are typically quite high. The possibilities of false attribution, self-deception, and post hoc reasoning are serious enough to warrant careful investigation.

Fourth, it is desirable that individual psychological interpretations of participation be supplemented with more careful attention to the social distribution of adult education and the compatibility of existing efforts with a variety of cultures. This is no small shift, since it would lift participation research out of the pragmatic emphasis of maintaining enrollments into the more ideologically acceptable question, "How can we be sure that the right kind of adult education is reaching the people it should reach?" This shift would necessarily remove from participation research the tacit implication that participation is a uniformly good thing in itself -- that cake decorating is as important an educational pursuit as citizenship education.

Cognition in Adulthood -- Sisco

For many years, the study of cognition, particularly during the adult years, has received little attention. Researchers interested in studying the phenomenon of learning have tended to look at environmental and behavioral functions that influence learning rather than more fundamental aspects of learning such as perception and cognition. Even in the area of intelligence, early conceptions about its permanent and one-sided nature have tended to dominate until recently. The same can be said for the instruments used to assess intelligence; most have stressed analytical and spatial aspects only. Happily, there have been several new developments in the areas of adult cognition and intelligence that show promise for the future.

Researchers have been able to identify a number of basic cognitive processes or controls called cognitive styles. According to Messick, cognitive styles refer to information processing habits which represent "a person's typical modes of perceiving, remembering, thinking and problem solving" (1976, p. 5). They are representative of how an individual gathers and organizes information in order to learn or solve problems. Put another way, cognitive styles are indicative of how one learns.

While there has been a proliferation of cognitive style research in recent years, most has taken a unidimensional approach of relating one or two measures of cognitive style to other variables which does not provide the researcher with a complete picture of the cognitive processes employed in a learning task. Also, most of this research has been focused on children and adolescents.

Pioneering work by Letteri (1980) and Kuntz and Letteri (1981) sought to address the unidimensional problem of cognitive style research through the development of a "cognitive profile" that places a subject on a three-level continuum using seven cognitive style dimensions. Through this continuum, the investigator is better able to assess the interactive relationships that exist among the various cognitive style dimensions and to study their combined impact on performance variables. To date, however, this work has also been confined largely to children and adolescents.

Recent work by Sisco (1987) has begun to address the problems of cognitive style research by replicating the cognitive profile work of Letteri and Kuntz with selected adult populations. Evidence to date has demonstrated the efficacy and potential of using a multidimensional approach to understanding cognitive performance of adults. A long-term research agenda is underway to see if the cognitive profiles are predictive of academic and standardized test performance of adults, as former work with children and adolescents has indicated.

The work of Robert Sternberg, who has focused on the study of intelligence and intelligence testing, is the second promising development for adult learning research. In his new "triarchic theory of intelligence", Sternberg (1986) suggests that humans possess three aspects of intelligence: componential, experiential, and contextual. While most intelligence research has focused on the componential aspect, which is similar to the "traditional" view of intelligence as analytical thinking. Sternberg also stresses the importance of insight and adaptation, or "street-smartness", as components of intelligence. These are, respectively, the experiential and contextual aspects of Sternberg's theory.

Sternberg's triarchic theory offers a more robust view of intelligence and seems to be consistent with such adult education adorations as andragogy, perspective transformation, and instrumental, communicative and self-reflective learning. It may, in fact, offer a stronger theoretical base with which to understand these adorations.

Learning Styles -- Coggins

As Messick (1979) stated, cognitive styles (or learning styles) have "broad import for education for they influence how students learn, how teachers teach, how students and teachers interact, and how educational and vocational choices are made." While the area of learning styles is one of great promise to enhance the teaching/learning transaction, a variety of issues remain to be resolved if this promise is to be realized.

One major issue is the lack of agreement on the definition of learning style. What are the essential elements of the construct of learning style? A review of the literature illustrates that there is considerable variety among the processes indexed by the various learning styles and that styles have been defined at different levels of discourse and as operating at different levels of generality. Some styles appear to overlap. among the remainder some appear to have been made purposely distinct, whereas others have no apparent connection with other styles. This variety is, in part, the result of styles being identified by different researchers from diverse theoretical vantage points at different points in time in response to differing research questions.

Grounded in data from a plethora of studies, learning styles identification preceded formulation of a theoretical structure about the nature of cognitive style. Thus, the concept has not yet been integrated, as a whole, into any of the dominant theories of psychology nor has a new theoretical framework evolved to define its boundaries and functional relationships.

Measurement issues also confound our progress in research on individual learning differences. One concern is that generally each particular learning style has only a single assessment task or tool associated with it. In addition to the limited availability of assessment measures, a number of educational researchers have concluded that selected instruments currently used to measure learning style are not sufficiently reliable and lack the statistical support necessary to ensure adequate validity (Sewell & Coggins, 1986; Freedman & Stumpf, 1978). Thus, the resultant assessments may have little practical value in educational settings.

As Shipman and Shipman (1985) note, "the general definitional problem ... and the overdependence on single measures for most styles have combined to create, or at least exacerbate, several important issues." These issues concern the relationship of learning styles to the cognitive and affective domains, and the generalizability of particular styles over time, task group, and context.

If we are to sustain effort in the area of learning styles, it is suggested that several of the issues noted above be addressed, especially the nature and origin of learning styles and their expression. Questions must be raised relative to the role of personal learning histories and biological predispositions in the development of learning styles; the impact of personal and situational factors on learning style selection and performance; the relationships among and between various learning styles; factors which affect the mutability of learning styles; the role of learning styles as higher order heuristics which serve to organize lower level educational strategies; the relationship of cognitive style to ability, skill, and personality. In addition, multiple measures of suitable psychometric quality must be developed if the research effort is to be furthered.

Personal Development -- Fellenz

Educators and philosophers, from Plato to Freire, have urged us to consider the goals of education. Learning is for the ennobling of humans, for the freeing of individuals, not for their "domestication." Whether educators are conscious of it or not, education is not neutral. If we accept this premise, i.e., that education does either promote or hinder the development of those involved, then we also accept the obligation of clarifying exactly what it is in our educational efforts that does liberate or dehumanize individuals. This seems a very difficult task, subject to personal whims or dogmatic predilections, unless we arrive at some consensus regarding what human liberation or personal development actually is. It is exceedingly difficult to hypothesize that a certain practice will or will not promote development if we do not know how to define development.

Developmental psychologists have offered various suggestions. Maslow is famous for his portrayal of the developed individual as self-actualized, while Rogers spoke of his ideal as fully-functioning. Others described specific traits the "developed" person should have and Shostrom even created an instrument, the Personal Orientation Inventory, to measure traits suggested by these humanists.

There have been many references in the adult education literature to the freeing of the learner or the growth of the individual as the goal of learning. However, Jensen's (1970) "Education for Self-Fulfillment" was the first specific treatment of the goals of personal development in the adult education handbooks. The 1980 handbook series, in contrast, included three sections on personal development. In addition certain books since the mid-1970s have reviewed developmental theories and encouraged educators to be effective developers of not just the intellect but also the total person.

Coggins (1980) posed four categories of individual growth with several properties within each. She summarized her schema as follows: (1) stance toward self (self-awareness, self-worth, and concern for self-development); (2) stance toward others (understanding of others, appreciation of others, concern for others, and interdependence); (3) stance toward life (depth of involvement, orientation toward the future, and courage to risk failure); and (4) stance toward knowledge and process (knowledge of problem-solving processes, appreciation of problem-solving processes, and other knowledge)> In my personal research I have come to a rather similar set of conclusions. My model of personal development is as follows: orientation toward self, orientation toward others, and orientation toward problems. Both schema were developed through extensive interviews with adult learners (Coggins, 1976; Fellenz, Conti, & Breckelbaum, 1982).

Personal development may be one of the most important keys to the study of participation and motivation for transitions in development and internal drives have repeatedly been linked to engagement in learning. Cognitive science is reemphasizing individual differences and impact of individual development on perception, information processing, and memory. Certainly, the degree to which adults engage in learning and the style they employ is to a large extent determined by their stage of development. Thus, research efforts in any of the aspects of adult learning discussed in this symposium imply a need for further research in personal development.

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AERC JUNTO SESSIONS

Two junto sessions have been planned for this year's AERC. Both sessions have been designed to obtain maximum input from participants and to generate suggestions for action. Presenters have been selected to provide focus to the sessions via brief (less than ten minutes) presentations. Recorders will document the deliberations of the groups; and moderators will keep the discussions on track and consult with recorders to develop a brief report to be presented to the AERC Business Meeting.

Junto #One:

Priority Research Needs in Adult Education: Focus on the 1990s

Moderator: Dr. David Deshler, Cornell University

Presenters: Dr. Jack Mezirow, Teachers College, Columbia Univ.
Dr. Larry G. Martin, Univ. of Wisconsin-Milwaukee

Twenty years have lapsed since the publication of Burton Kreitlow's Taxonomy of Needed Research in 1968. During the intervening years the field of adult education has greatly expanded its research activity. However, much of the research produced reflects the interests of researchers and available funding, and has resulted in an uneven mixture of concentrated research in some areas and a paucity of research in others. This generative session will identify participants' perceptions of the priority research needs in the field of adult education that will likely become salient during the decade of the 1990s.

Junto #Two

Critical Needs and Future Directions of AERC: Focus on the 1990s

Moderator: Dr. Rosemary S. Caffarella, Virginia Commonwealth University

Presenter: Dr. Roger Boshier, University of British Columbia

The adult education research conference (AERC) began twenty-nine years ago as a means for a small group of interested colleagues to share their research findings and discuss various research related issues. The conference now attracts a large group comprised of both expert and novice researchers from throughout North America and other parts of the world. This generative session will focus on the current structure and operating procedures of AERC and the appropriateness of these in meeting the organization's present and future needs. The participants will produce a brief report identifying possible actions which should be taken to respond to present and potential internal and external environmental challenges to AERC.

A COMPARISON OF ATTITUDES TOWARD COMPUTERIZED INSTRUCTION AND ADULT STUDENT LEARNING STYLES

Connie Carpenter, RN, MS and Ingrid Brudenell, RN, MS

Abstract: The purpose of this study was to determine if individuals in certain learning style categories would have a more favorable attitude toward computer assisted instruction.

In a quasi-experimental design, questionnaires were administered to adult students enrolled in a Nursing Research course, to measure attitude toward computer assisted instruction and to identify student learning styles. Data analysis indicated a change in attitude with an overall decrease in attitude toward computer assisted instruction (CAI) when compared with learning style.

Computer assisted instruction is an educational strategy used increasingly in nursing and other fields. The student's perception of interest is a good predictor of learning. The increasingly negative attitude toward CAI in this study may reflect several factors; 1) an evaluation of the CAI software, and, 2) high student expectations of the CAI, which were not fulfilled.

POSTER PRESENTATION-1988 AERC, Calgary

Sonia Crandall, Kellogg Fellow
8440 NW 85th St
Oklahoma City, OK 73132

ASSESSMENT OF INTENDED AND UNINTENDED OUTCOMES OF A MANDATORY MANAGEMENT DEVELOPMENT PROGRAM (RESEARCH IN PROGRESS)

There is much dispute regarding the effectiveness of Mandatory Continuing Professional Education (MCPE). Many professionals believe that MCPE is a good way to police a profession and protect the public from less than competent practitioners. Others believe that MCPE erodes one's sense of professionalism and is counter-productive. Few professionals would doubt that continuing education is essential for keeping abreast of new developments and new technologies within the professions. The question that arises however is, " . . . do people who are required to attend continuing education classes necessarily become more competent" (Cross, 1981, pg. 42)? Does forced participation improve practice? Lisman and Ohliger (1978) believe that MCPE is viewed more as punishment than opportunity for many professionals. This view has the potential to change education's image from positive to negative. Although controversy exists, there is a paucity of empirical research regarding the relationship between MCPE and professionalism.

The purpose of this study is to assess the intended and unintended outcomes of a mandatory management development program. The study involves surveying 150 lower, middle, and upper level managers employed in a large hospital situated in a S. W. Metropolitan area. These managers were required to attend a fifteen hour management course. The survey is intended to measure 1) the importance of various factors in deciding to attend any continuing education program, and 2) the effect of the mandatory management development program, i.e. intended and unintended outcomes. Intended outcomes are positive changes in managerial practice in specific areas outlines as program objectives. Unintended outcomes are perceptions regarding MCPE. A five point Likert scale will be used to measure both intended outcomes and importance of various factors in deciding to attend any program. A four point Likert scale will be used to measure unintended outcomes. Open-ended questions are also incorporated into the survey to elicit written responses regarding MCPE and to determine specific demographic characteristics about each manager.

Although this study is primarily concerned with the managerial group as a whole, it is predicted that managers will fall logically into two categories, 1) those who attended only because the program was mandatory and 2) those who attended because they felt there would be some benefit gained from attending, i.e. they wanted to participate. (The fact that the program was mandatory had little impress on them.) If logical categorization occurs, comparison of responses will be made and an analysis of variance (ANOVA) will be used to determine if any differences exist between the two groups of managers. Furthermore, comparisons of responses by managerial level will be made. Data collected will be used for program planning and improvement at the hospital surveyed. Posters for this presentation will illustrate assessment of survey results.

A Classification of Adult Learning Research

Patricia M. Lundgren
Barbara A. White, Robert A. Fellenz
Center for Adult Learning Research
Montana State University

Introduction:

The term, adult learning, has been used quite broadly within the adult education literature, included with such topics as physical condition, personality, women's roles, and change. (Knox, 1977). Long (1983) deals specifically with adult learning and with anatomical and chemical factors in learning and memory before moving on to participation studies, program development, and the teaching-learning transaction. Do these topics form part of the core of adult learning research? Or, does the interdisciplinary nature of many adult education programs and the traditional "borrowing" of research from other fields make it imperative that any categorization of adult learning research be broad enough to accommodate for appropriate studies from a variety of fields.

Statement of the Problem:

The problem under consideration is directed toward the identification of potential categories which might be used in the recognition and organization of research topics in the area of adult learning. The Kellogg Center for Adult Learning Research, located at Montana State University, has been challenged to conduct an analytical review of adult learning research to assist in the identification of such categories.

Methodology:

With one of the benefits of a poster session the on-site, opportunity to interact with colleagues relevant to particular topics, the present poster session contributes to the dialogue by implementing the following:

(1) provision of an opportunity for participants to identify, evaluate, and add specific pieces of research to the identified categories presented, and
(2) provision of an opportunity for additions or clarification, i.e., the synthesizing of categories presented.

Description of the Data:

The data for the poster session will include preliminary work conducted by the Center for Adult Learning Research involving the tenative identification of logical categories within the field. Examples of topics deemed appropriate for the categories will be provided. Additional data collected "on-site" will contribute to the substaniation of the categories and known research topics supporting the categories.

Conclusion: The results of the poster session will assist in the identification of a set of categories which can be reported to the field and which will aid in the organization of current research and the recognition of areas in need of research.

COMPARING CHARACTERISTICS AND COURSE COMPLETION RATES BETWEEN ADULT TELECOURSE AND ON-CAMPUS STUDENTS

George H. Ryan
University of Oklahoma
Norman, Oklahoma

The utilization of telecommunications as a tool for Distance Learning in higher education is becoming more and more commonplace. Telecommunications includes the use of broadcast television and videotapes as the primary method of instruction. Such courses are known as telecourses.

It is suggested by Dale that the use of textbooks in the traditional classroom setting is a more abstract method of content organization than the use of structured audio-visual aids. The combination of textbooks, audio-visual aids and study materials is seen as a more concrete method of content presentation.

This study will compare telecourse students enrolled at member colleges of a southwestern Higher Education Telecommunications Association and their on-campus counterparts taking the same courses through more traditional classroom methods. The telecourse classes utilize the Public Broadcasting Service's Adult Learning Service courses. These are taught by televised lessons accompanied by a textbook and study guide. Only three on-campus activitites are required - an orientation and two tests. The on-campus classes are taught by classroom lecture and textbook assignments. The courses to be used for this study shall be History - U.S. 1492 to 1865, Introduction to Sociology, and Government of the U.S.

In addition to gathering course completion and demographic data, a survey will be conducted of both groups seeking information regarding reasons for taking the class, reasons for choosing one course type over the other and an evaluation of their learning experience.

It is expected, as Dale suggests, that differences may be found between the two study groups. Relationships between the type of course and completion rate, the age of the student and the type of course, the age of the student and reason for taking the course, and the age of the student and completion rate may be indicated.

Such information could be helpful in assessing the value and effectiveness of telecourse offerings and identifying the type of student most likely to enroll in telecourses. This information could enhance the telecourse marketing efforts by developing a baseline profile of students who enroll in telecourses.

Poster Session
Calgary

Elizabeth Semtner
Humanities Division
6420 S.E. 15th
Rose State College
Midwest City, OK 73110

Michael Langenbach
College of Education
820 Van Vleet Oval
University of Oklahoma
Norman, OK 73019

A REVISED ADULT READING ATTITUDE INVENTORY

Fishbein and Ajzen's (1975) contention that attitude is made up of three dimensions (beliefs, feelings, and behaviors) was used as the theoretical foundation for a reading attitude inventory for adult beginning readers (Heatherington, Gambrell, and Boser, 1986). The final version of the inventory contained 20 items, categorized according to five situations: consumer; working/job related; home/family; social; and leisure/recreational.

Because the developers reasoned that each subscale represented a dimension of attitude, no overall reliability estimate was deemed appropriate. However, since each subscale is a dimension of attitude, it would seem to suggest that they are indeed additive. In order to correct this shortcoming, the inventory has since been subjected to two separate factor analyses to verify the three dimensions and to estimate overall reliability.

The first analysis resulted in a three factor solution with low reliability that did not confirm the developers' contention of a three dimensional base. The second factor analysis, administered after culling the four "weak" items, did not conform with the original version or the second analysis, but did yield a reliability estimate of .80.

Having reached what was thought to be a point of diminishing return, continuing to cull "weak" items would no longer be either efficient or effective. Rather, it was time to rewrite and construct new test items that seem to be situational rather than belief/feeling/behavior oriented since, in fact, the 3-factor solution from both factor analyses appeared to be situational. Clearly, one factor contained items related to attitudes toward children and reading; one factor toward personal/free time reading; one factor toward work/business related reading.

The revised inventory was administered to 204 adult students in a community college developmental reading program. The items were read aloud to avoid possible interaction with reading levels. A three factor solution was the most parsimonious model, but even that excluded five items that did not load well, if at all, on any of the factors. Total inventory reliability was .75.

The expectation of confirming the three situational factors from previous research was only partially met. Based on the factor analysis, the inventory, though reliable, appears to be based on constructs that elude discovery. The posters will display the 20 items and their factor loadings.

Interprofessional Collaborative Continuing Education in the Health Professions

Carole A. Sullivan

In March, 1985 the Oklahoma State System of Higher Education was awarded a grant by the W.K. Kellogg Foundation to improve its citizens access to educational programs and to develop a statewide network of continuing education service for adults. The Kellogg grant involves seven different modules with time frames from three to five years. This study will focus on module seven, interprofessional collaboration. The goal of the interprofessional module is to establish a statewide system of collaborative continuing education for health care professionals. Collaboration is the essence of the module in view of the changing dynamic in the health care environment. Health care providers no longer function in isolation as independent practitioners. Practitioners, in the course of a year, may be teamed with as many as a dozen other professionals such as physicians, physical therapists, lawyers, dietitions, nurses, pharmicists, ministers, social workers and many others. To the extent these professionals work together, why not learn together?

To establish a learning link as a corollary to the working link, a new set of relationships between health professionals in the educational environment is a first priority. A framework or format for collaboration was adapted from the Practice Audit Model developed at Penn State University for pharmacists. It is a systematic process for identifying the educational needs of practitioners and translating them into educational programs through a collaborative process involving subsystems of the university and the professions. The Oklahoma module on interprofessional continuing education intends to expand the focus to include medicine, nursing, pharmacy, allied health, public health, social workers and lawyers. To achieve the interprofessional collaboration a ten member developmental taskforce was established to conceptualize the project, to select and present the first continuing education seminar and to identify twenty Fellows representative of the health professions to serve the three year period and develop at least three interprofessional continuing education programs.

The ten member developmental taskforce developed, as a pilot project in leadership development, the first interprofessional continuing education seminar which was presented in October, 1986. To establish a linkage among educators in the health professions, the seminar focused on Ethics, Faculty and the Curriculum. The study involves surveying 125 health care educators and/or practitioners who attended the first seminar to determine whether and to what extent seminar content had interdisciplinary application in their roles as educators within six months following participation in the seminar. Posters will summarize the quantitative and qualitative findings.

Bridging the Distance via Satellite: An Experiment in Distance Education at the University of Saskatchewan

by

Angelina T. Wong and W. Brock Whale
Division of Extension and Community Relations
University of Saskatchewan

Saskatchewan is a province characterized by small communities separated by great distances. The Extension Division at the University of Saskatchewan has had a long tradition of offering courses to meet the needs of students who wish to pursue university studies without travelling long distances to study on the campus in Saskatoon. The two dominant approaches used have included "travelling instructors" and "independent study." Like many other Canadian universities, we have been under pressure to trim our budgets while maintaining or increasing the quality of our programs. As a result, we have experienced increasing difficulty in recruiting faculty to teach off-campus classes and in providing courses to those communities where enrolment is very small.

To increase access to university courses while maintaining the goal of having the subject matter taught by the most qualified faculty available, our Division embarked on an experiment which attempts to combine the best elements of conventional university teaching and independent study. Under this approach, students participate in a learning process which includes individual reading assignments outlined in a course guide, weekly presentations of the subject matter (via satellite television) by a highly qualified faculty member, discussions led by local tutors/proctors, on-air interaction with the instructor, and individual consultation via long distance telephone.

Two introductory courses in English and History were offered via this mode to 14 communities beginning September 1987. The poster session will present an overview of the delivery model, the roles and responsibilities of the team members, and some of the feedback obtained from a formative evaluation conducted 11 weeks after the program began. The formative evaluation was conducted to obtain student ratings of and comments on a number of variables associated with the design and delivery of the two courses. The tutors/proctors were also surveyed to obtain their reactions to their roles and experiences.

The data was analysed and compared between groups according to whether the courses were offered in a "large" community or a "small" community, and according to whether the receiving site had a tutor or proctor. In the former instance, large communities were those which have had exposure to conventional university classes before the experiment. In the latter, both tutors and proctors were expected to facilitate local discussion, but only tutors were expected to mark assignments. While both the students and the tutors/proctors perceived their participation in the experiment to be a positive experience, there were some significant differences in the ratings of some variables, including the perception of the televised lectures and the role of the tutor/proctor.

Dawn Zoller
3001 Pheasant Run Rd. #187
Norman, OK 73072

A STUDY OF THE EFFECTS OF NEW CERTIFICATION REQUIREMENTS ON TEACHERS OF ADULT BASIC EDUCATION

Some states require that teachers of Adult Basic Education return to the college classroom to certify in A.B.E., while other states still require only a valid teacher certification (elementary or secondary) for their adult education instructors. One southern state recently has required that all A.B.E. teachers certify by taking 12 additional college credits in adult education courses. The value of the coursework has been questioned by some, but the State Department of Education requires it, so the teachers have returned (though some reluctantly) to the classroom in order to obtain this newly required certification.

This study will target teachers of A.B.E. who have obtained recently or are working currently on obtaining the certification in adult basic education. The survey-method approach of this study will question the teachers in order to determine their perceptions concerning the college course curricula, the value of the coursework to their teaching, their attitudes toward this continuing education requirement, and their opinions on the required A.B.E. certification. It will attempt to find out whether the teachers value or resent the new certification requirements. In order to control for quality of coursework taken, which could affect attitude toward the requirement, a three point scale will be used to classify each teachers responses as they relate to the curricula (above average, average, below average).

Because there are many states that still do not require any special certification in A.B.E. it will be important to establish some preliminary base-line data from in-service teachers of adult basic education. Posters will summarize the quantitative findings and suggest next steps for continuing this inquiry.